A COMPUSERVE PUBLICATION PRINTED MONTHLY/ONLINE DAILY

ONLINE TODAY

October, 1988 $2.50

SUPER POWER

Upgrades Strengthen Your Micro

BULK RATE
U.S. POSTAGE
PAID
LANCASTER, PA
PERMIT NO. 1307

ACCESS
ONLINE INQUIRY, A UNIQUE CHANNEL
TO ONLINE TODAY ADVERTISERS THAT
IS MORE DIRECT THAN CONVENTIONAL
READER SERVICE SYSTEMS. RECEIPT
IS SENT FOR EACH INQUIRY. **GO OLI**

OAG gives you more for less.

ELECTRONIC EDITION® TRAVEL SERVICE

Get ready to blast off into a whole new dimension of exciting worldwide travel planning!

It all begins when you tap into the OAG ELECTRONIC EDITION TRAVEL SERVICE and explore the "new worlds of OAG", at dramatically reduced surcharges.

Start your adventure with the **expanded 80-character** airline schedule and fare displays . . . with travel restrictions listed right on the fare screen. You can "look or book"—your choice! Then keep on cruising—with Frequent Flyer/Frequent Lodger Award Program Information, Travel News, Tours, Cruises and Discount Travel Packages, and Country and Traveler's Information.

Launch your adventure when you access today—there's nothing on earth quite like the OAG ELECTRONIC EDITION TRAVEL SERVICE!

To access the *NEW* OAG ELECTRONIC EDITION TRAVEL SERVICE on CompuServe, enter:

GO OAG

Official Airline Guides

a company of The Dun & Bradstreet Corporation

GO OLI for more information.

HAVE THE NEWS YOUR WAY.

GO MHSNAP

THE PICTURE IN AN INSTANT WITH THE McGRAW-HILL NEWS SNAPSHOT.

Staying up-to-the-minute on business news can be critical to your business. Here's an easy and inexpensive way to do it in a snap. With the McGraw-Hill News SNAPSHOT, you get the top five business headlines of the hour flashed on one screen, along with key current stock market indicators. It's the latest news, updated every hour on the half hour. When you see a story you need to know about quick—in time to do something about it for your business—select the item number to get the story.

If you need even more information the SNAPSHOT provides an immediate gateway into CompuServe's Executive News Service. Now that's service.

GO ENS

THE WHOLE STORY —AND EVEN ITS *IMPLICATIONS* FOR YOUR BUSINESS.

McGraw-Hill News brings you the most timely, thorough business news available *online.* News about specific companies and industries. Government, stock market, economic and political news.

Uniquely, it provides in-depth follow-up on vital stories with commentary by industry specialists. And since it is adapted for the Executive News Service, you won't have to learn new commands. You get to the news you need fast—it's easy to find. For a FREE Quick Service Card, call 1-800-426-0647. Only McGraw-Hill News can give you business news *your* way. With service you're not going to find anywhere else. Now that's service.

McGRAW-HILL NEWS

THE BUSINESS NEWS SERVICE THAT SERVES YOU BETTER.

© 1988 McGraw-Hill, Inc. All rights reserved.

GO OLI for more information.

CONTENTS

BUSINESS/INVESTING

14 On the Fax Track
EasyPlex-Fax link connects businesses worldwide.

16 The Investors' Library
Forum 'treasury' holds a wealth of investment ideas.

NEWS/REFERENCE

18 Sports Stats
Longtime football fans kick off the season with ENS.

20 Ask the Librarian
Database librarians staff online 'information desks.'

COMPUTING SERVICES

22 Super Power!
Hardware and software upgrades can strengthen your micro.

26 Specialized Support
Software vendors use forums to lend that personal touch.

LIFESTYLES

28 Computer Construction
Forum administrator Dawn Gordon tells how she built a '386 modular computer and offers tips you can use.

TRAVEL

34 Desert Delights
Sun and celebrities await Palm Springs vacationers.

REVIEWS

37 Hardware
Acer 1100 *80386-based microcomputer from Acer Technologies*

38 Software
Multiscribe GS *word processor from Styleware*
WordPerfect Executive *integrated package from WordPerfect*
GEM Presentation Team *package from Digital Research*
Stepping Out II *screen extender from Berkeley Systems Design*
IntroCAD *package from Progressive Peripherals and Software*

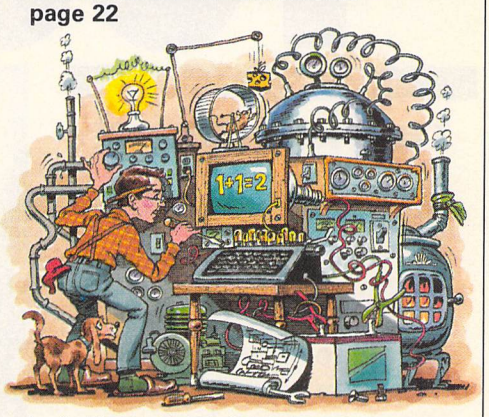
44 Books

DEPARTMENTS

3 *Letters*
4 *Dear Reader*
10 *Monitor*
12 *How to Get the Most Out of CompuServe*
16 *Business Briefs*
17 *Uploads: New Forum Files*
36 *At Your Service*
45 *Industry Watch*
48 *Update: Last-minute News*

COVER STORY

Power Up Your Micro with Peripherals and Software Enhancements—page 22



LIFESTYLES

Find Out How to Build a Computer Yourself and Save Money—page 22

Too Hot to Print

Catch computer industry news as it happens, keep up with online events, read special reports, commentary and more product reviews. You'll find it only in *Online Today Daily Edition*, a daily-updated newspaper full of information that's too hot to print. GO OLT.

Behind the Screens	OLT-130
CompuServe This Week	OLT-50
Letters to Editor	OLT-30
News This Week	OLT-20
Online Inquiry	OLI-1
Online Today Columns	OLT-110
Online Today Guide	OLT-351
Product Reviews	OLT-200
Special Reports	OLT-2000
Today's Daily News	OLT-90

Online Today (ISSN 0891-4672) is published monthly in the United States of America by CompuServe Incorporated, 5000 Arlington Centre Blvd., Columbus, OH 43220. Application to mail at Second-Class postage rates is pending at Columbus, Ohio, and additional mailing offices. POSTMASTER: Send address changes to *Online Today* Reader Administration, P.O. Box 20212, Columbus, OH 43220-0212.

LETTERS

Archiving Articles

The August *Online Today* had two letters about tracking previous articles. I find it unusual that CompuServe users would consider manual methods for tracking articles. There are several electronic packages specifically designed to track and retrieve articles and publications (for example, Reference Manager and REF-11). In addition, any database management system could be modified for such a use.

Gary Novack
Irvine, Calif.

It is interesting to read about the strategies *Online Today* readers have for finding articles from previous editions. I wonder, though, why your magazine is not stored in a convenient, searchable online form.

Kim L. Serkes
San Francisco, Calif.

I save several articles in every issue of *Online Today*. Consequently, I keep nearly all issues. Do you compile an annual index? I would think that if you made it available online, many readers would take advantage of it.

Roy Greenberg
East Hampton, N.Y.

Conference Schedules

I noted Steve Frank's letter (July issue, p. 5) about the conference schedules. I also request that you arrange the conference listings in a daily format so subscribers can know what's happening today. I downloaded OLT-74 but I can't keep it as current as you can.

Pete Sellers
Washington, D.C.

Spreadsheet Review

I have a comment on the review of 20/20 (August issue, p. 38). After using this spreadsheet program for three years, I've found it to be outstanding as a grade-book program and for other applications. The review did not mention the main difference between 20/20 and other spreadsheets: its coordinate system. All cells are number-pair identified (for example 25,10). This is more logical than numbers and letters.

Also, I regularly run up to 350K on a Compaq Portable II with 640K RAM and a 20MB Plus Hardcard with no problems.

Jim LaCasse
East Chicago, Ind.

Tutorial Articles

Online Today has featured tutorial articles about how to do things better on the CompuServe Information Service. These are helpful and excellent for people like me. Please keep them coming.

Cass Cassing
Overland Park, Kan.

Correction

The July cover story, which mentions the Consumer Electronics Forum, has an error on page 50. *Videofax*, not *Video-Facts*, is the correct name for the magazine.

Send a Letter

OLT-30 **Letters to the Editor** *main menu. Lists all departments.*

OLT-31 **Send a letter instructions.** *Complete instructions on how to send a letter to the editor via the electronic service.*

OLT-32 **Read letters** *from other OLT readers.*

OLT-33 **Send a letter** *to the editor. You will receive prompts for each step in the process. Important Note: We cannot answer questions regarding the CompuServe Information Service through this service. If you have questions or problems, please use the Feedback service (GO FEEDBACK).*

Need to Keep Up with the Computer and Information Industries?

We publish all the computer industry news every day in *Online Today Daily Edition*. GO OLT-90 from any prompt on the CompuServe Information Service.

ONLINE TODAY

FREE Listing

Business associates and friends can find you fast when you list your electronic mail addresses for FREE in the National E-Mail Registry—the national online directory.

List your FAX and telex numbers, too. No cost to call *or* register!

Electronic Mail Directory

Log on—toll-free—via modem. Have your E-Mail address(es) handy. Registration takes only a few minutes. It's free...so call today!

800-622-0505
via modem

(300, 1200, or 2400 baud)
After you connect, touch RETURN 3 times.

NATIONAL E-Mail REGISTRY

GO OLI for more information.

DEAR READER

Keeping up with rapidly advancing technology—even if it is no more than the microcomputer that sits on your desk—can be an overwhelming task. Many of the standard information sources are underwhelming, not to mention seriously biased or out of date. There simply is no better way to stay informed about the latest hardware upgrades, communications packages and software advances than by tapping into the CompuServe Information Service. Without question, making contact with resident experts (who are quality-conscious computer consumers just like yourself) in dozens of hardware and software support forums is the most effective way to get quality advice and fast, unbiased answers to your questions.

In this month's cover feature beginning on page 22, you'll find out about the best places to get information on boosting hardware, the latest on new high-speed modems, improved graphics software, efficient uploading and downloading, and much more. Before you buy, invest a little time in reading this article and then explore your options on CompuServe.

* * *

If you really like to take matters in your own hands, don't miss a special feature in this month's Lifestyle section on page 28. Dawn Gordon, administrator of the Consumer Electronics Forum, takes you through the steps involved in building your own computer from a kit. A do-it-yourself computer is rewarding in more ways than one: you have an "I did it myself" satisfaction and a computer that would have cost as much as $2,400 more if purchased fully assembled. And, Gordon says it's a lot easier than you might think ...

* * *

EasyPlex, the CompuServe Information Service's electronic mail system, is now linked to facsimile machines worldwide. Now you can send messages and documents via EasyPlex to any fax machine for about the same cost as sending them from your own fax—even less if you figure in machine owning and operating costs. The CompuServe connection can save you time, too. CompuServe dials the fax number—and redials repeatedly if the line is busy—until a connection is made. You receive notification via EasyPlex when the message is successfully transmitted. Find out more about this amazing new service on page 14.

Douglas G. Branstetter
Editor

ONLINE TODAY

***Online Today*®, October 1988**
Volume 7 Number 10

Publisher
Calvin F. Hamrick III
Editorial Director
Richard A. Baker
Editor
Douglas G. Branstetter
Art Director
Thom Misiak
Managing Editor
Mary Mitchell
Associate Editor
Kassie Rose
Assistant Editor
Denise M. Erwin
Contributing Editors
Charles E. Bowen, Cathryn Conroy, John Edwards, Carole Houze Gerber, Ernest E. Mau, Holly G. Miller
Copy Editor
Kacy Cook
Production Coordinator
Barbara Cagley
Photocomposition Coordinator
Susan Toombs
Editorial Intern
Gayle Brown
Editorial Assistant
Robert Loomis

ADVERTISING SALES
Associate Publisher
Peter A. Scott, 5000 Arlington Centre Blvd., Columbus, OH 43220; 614/457-8600
Northeast Hajar Associates Inc., P.O. Box 345, Norwood, MA 02062; 617/769-8950; Paul Hajar, Michelle Dube
Mid Atlantic Nelson and Ross Associates Inc., 55 Scenic Dr., Hastings-on-Hudson, NY 10706; 914/478-4408; Bonnie Nelson
Southeast Fox Associates Inc., Suite 275, 6100 Lake Forrest Dr., Atlanta, GA 30328; 404/252-0968; Rick Gower, Jim Manry
Midwest Kingwill Inc., 4433 W. Touhy Ave., Chicago, IL 60646; 312/675-5755; Dave Kingwill, Baird Kingwill
Northwest Fox Associates Inc., 870 Market St., San Francisco, CA 94102; 415/989-5804; Stephen E. Schwanz
West The Faust Co., 24050 Madison St., Suite 101, Torrance, CA 90505; 213/373-9604; Richard Faust, Doug Faust, Robyn Faust

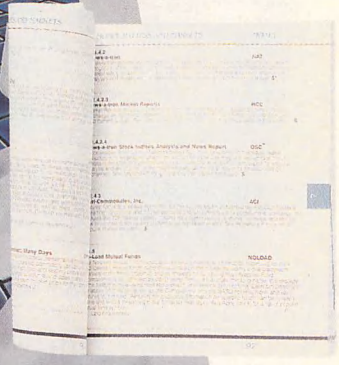
MPA BPA SELECTED MARKET AUDIT DIVISION

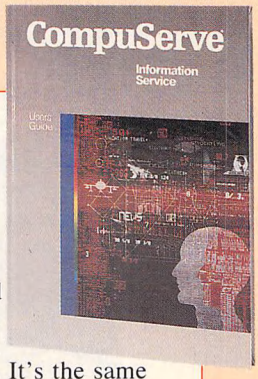
President and Chief Executive Officer, Charles W. McCall; **Executive Vice President, Information Services**, Maurice A. Cox; **Executive Vice President, Software Products Division**, Robert J. Massey; **Executive Vice President, Support Services and Chief Technical Officer**, Alexander B. Trevor; **Executive Vice President, Business Services**, G. Clark Woodford; **Senior Vice President, Business Support and Development**, Barry F. Berkov; **Vice President, Market Development and Services**, John E. Meier; **Vice President, Human Resources**, Judith S. Reinhard; **Vice President, Finance**, Jeffrey T. Weisner.

Copyright©1988 by CompuServe Incorporated an H&R Block Company. All rights reserved. Contents may not be reproduced in whole or in part without written permission of publisher. *Online Today* (ISSN 0891-4672) is a registered trademark of CompuServe Incorporated. Printed in USA by R.R. Donnelley & Sons Co., Chicago. Subscriptions: United States, AFO—$30 one year; Canada and elsewhere $40 one year. Single copies $2.50 in US, AFO and Canada. Telephone: 614/457-8600. *Online Today* assumes no responsibility for return or safety of unsolicited matter. Direct editorial correspondence to: Editor, *Online Today*, P.O. Box 20212, Columbus, OH 43220. Advertising Reader Service: Reader Service Management Dept., P.O. Box 376, Dalton, MA 01227-0376.

CompuServe offers a variety of products that help you get the most out of every online session. Other offerings bring online areas to a much fuller life, while CompuServe fashions make attractive additions to any wardrobe. And the Fall Fingershopping sale is just the place to find valuable savings on numerous CompuServe products for the upcoming holiday season.

The fall Fingershopping sale runs from October 1, 1988 through November 30, 1988.





CompuServe Users Guide
(new 5/88 version)

The recently updated version of this guide is highly recommended for subscribers who've come online through a CompuServe IntroPak. It's the same guide that comes with the Information Service Subscription Kit.

The guide covers: EasyPlex® electronic mail; the Executive News Service; the National Bulletin Board; Citizen's Band Simulator; special interest forums; information transfers; travel services; financial services; electronic shopping; interactive games; and more.

A System Configuration Diagram and Quick Reference booklet come with the Information Service Users Guide for further assistance.

Reg. $14.95 Save $4.00 $10.95

New CompuServe Almanac
(Fourth Edition)

There are hundreds of offerings on the CompuServe Information Service you may have never visited. Use the CompuServe Almanac (Fourth Edition) to get acquainted with those unfamiliar areas without visiting them individually online. More than 300 pages are loaded with helpful features, presenting products in "workbook" style to help you research and recall key destinations. It's certain to pay for itself in connect time savings.

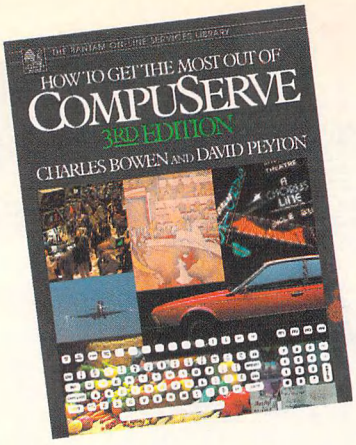
Reg. $12.95 Save $5.00 $7.95

The CompuServe Information Service Subscription Kit

Put a family member, friend or business acquaintance online with a CompuServe Information Service Subscription Kit. This includes a copy of the CompuServe Users Guide, a Quick Reference Guide, a System Configuration Diagram, plus:

- a $25 introductory usage credit
- a personal User ID number and private password
- a list of Information Service rates and local telephone access numbers
- a subscription to *Online Today* magazine

$39.95



How To Get the Most Out Of CompuServe *(Third Edition)*
by Charles Bowen and David Peyton

This Bantam book continues to receive praise from accomplished CompuServe users, novices and even non-subscribers for its step-by-step discussion of CompuServe's leading products. Included in the book is a $6 usage credit!

Reg. $19.95 **Save** $3.00 **$16.95**

Advanced CompuServe for IBM Power Users
by Charles Bowen and David Peyton

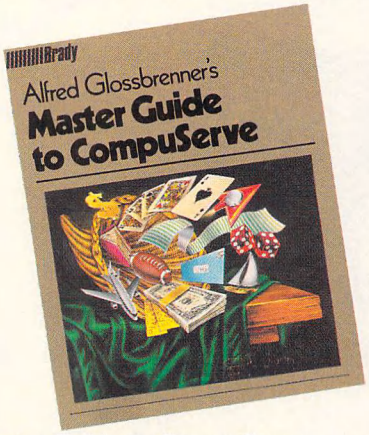
A must for any IBM power user's library. This book is written for the accomplished CompuServe user with an IBM PC or compatible. It addresses some of the finer points of CompuServe such as uploading and downloading non-commercial software to and from IBM-related Forums, archived and libraried files, communications programs and several other more advanced topics.

Reg. $19.95 **Save** $3.00 **$16.95**

Island of Kesmai Guide

One of CompuServe's leading adventure games, Island of Kesmai, is like no other online island you've ever visited. Prepare yourself with this comprehensive island atlas. Meet the inhabitants, learn their customs and social mores. You won't just bring the game's interactive features to greater light, you'll lead a longer life in your island role. Guide comes in a sturdy vinyl binder.

Reg. $19.00 **Save** $2.50 **$16.50**



Master Guide to CompuServe
by Alfred Glossbrenner

From the author of several online computing books comes the *Master Guide to CompuServe*, written for novice and advanced CompuServe users alike. According to the author, it not only explains how to use the service, but gives you all the necessary tools to keep up with the constant expansion of CompuServe Information Service offerings. It's an invaluable resource for CompuServe users of all levels.

Reg. $19.95
Save $3.00 **$16.95**

Island of Kesmai T-Shirt

Look your very best for your next visit to the island. This Island of Kesmai T-shirt is the ideal attire for encounters with island inhabitants of all sorts.

$7.95

MegaWars I Package

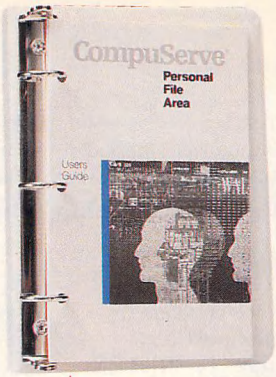
Real-life accessories for the fantasy gamer. This package includes a MegaWars Briefing Guide in a three-ring binder, along with a series of five MegaWars spacecraft blueprints and a galaxy map to enhance your Megawars I play.

Reg. $16.95 **Save** $2.00 **$14.95**

CompuServe Games Guide
(second edition)

This manual of the CompuServe game universe offers descriptions of all game offerings, rules, playing suggestions and a section on getting the most out of the Gamers' Forum. Guide comes in a sturdy vinyl binder.

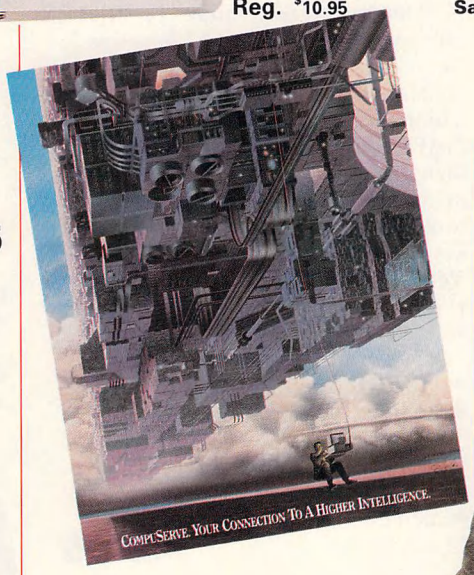
Reg. $17.95 **Save** $2.50 **$14.95**



Personal File Area Guide

All subscribers receive 128K of storage in a Personal File Area and this Personal File Area Guide explains how to use it to its utmost potential. File management programs, text editors, storage techniques, EasyPlex shortcuts and more are discussed in the guide. It includes: ICS, Terminal Parameter and EDIT Reference Cards. (Binder not included)

Reg. $10.95 **Save** $3.45 **$7.50**



New Higher Intelligence Poster

Original artwork produced exclusively for CompuServe. A detailed rendering of the "higher intelligence" image. A colorful and mind-boggling piece of art that will enhance any office or den. Poster is 18½" x 24".

Only $1.00

IQuest Database Directory

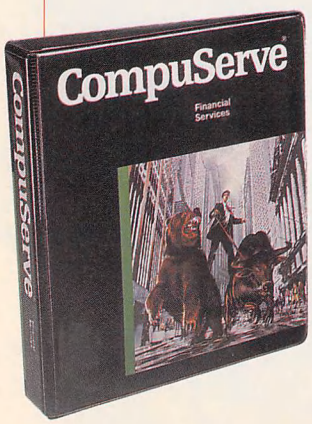
Use IQuest more efficiently and effectively with its own guide published by CompuServe. It provides a description of each database and is broken down by subject for easy reference. Anyone who uses IQuest will find this a valuable tool to speed research and conserve online connect time.

$3.95

BlackDragon T-Shirt

Clad yourself in stylish battle gear with this black and white BlackDragon T-shirt. A must for any true dragonslayer.

$7.95

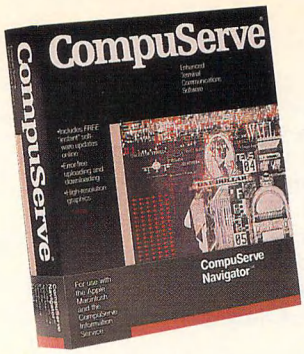


New CompuServe Financial Services Users Guide

This all new guide is an exhaustive analysis of all the financial services offered on CompuServe. It explains each service in-depth and how to use it with maximum effectiveness. Ideal for new or veteran investors. A classic case of minimal investment, high return.

Reg. $13.95

Introductory price **$9.95**



CompuServe Navigator Communications Software

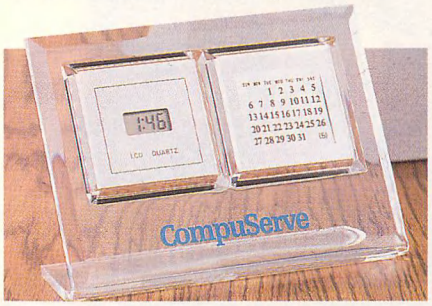
CompuServe Navigator communications software (version 2.4) for the Macintosh lets you automate online access to the CompuServe Information Service. Specify your online destinations and tasks and CompuServe Navigator does the rest. It works more efficiently on CompuServe than any other communications software for the Macintosh, thus conserving online time. CompuServe Navigator includes all of the following and more:

- latest version of CompuServe's enhanced B protocol; 30% faster than industry standard XMODEM
- Support of GIF graphics
- Offline composition capabilities

Suggested retail $79.95

Introductory price $59.95

Look for version 3.0 coming soon.



CompuServe Digital Desk Clock

This contemporary timepiece, mounted within a clear lucite desk stand for high visibility, is an attractive addition to any computer workstation—home or office. It prominently displays the CompuServe logo and comes with a perpetual calendar in an adjacent window.

Reg. $10.95 Save $5.45 $5.50

CompuServe Gift Certificates

Give the gift of CompuServe this holiday season. Gift Certificates are available in the amount of $25 and can be applied to future online usage charges. A CompuServe Gift Certificate is a useful and unique gift for any online enthusiast.

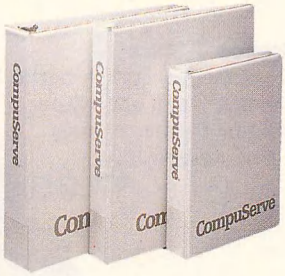
$25.00 each (Plus $3.00 shipping & handling)

Professional Connection™ Version 3

This powerful software package for the IBM PC, XT, AT and most compatibles has all the features of VIDTEX plus more. Professional Connection Version 3 illustrates colorful financial charts, pictures and weather maps with CompuServe's new GIF protocol, NAPLPS and RLE graphics. It also dials the phone, completes your connection and takes you where you want to go online—with just a few simple keystrokes. Professional Connection Version 3 includes all of the following and more:

- latest version of CompuServe's B protocol for even faster downloads
- 110-9600 baud support
- Remote Job Script Command Language
- terminal settings directory
- custom menus
- menu or command driven

$49.95

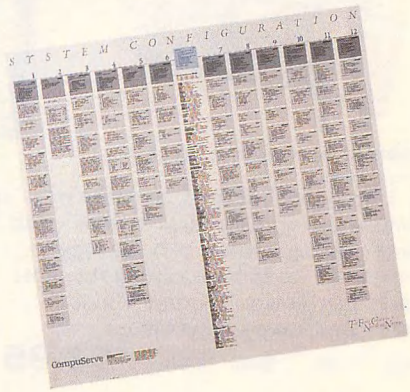


CompuServe Three-ring Binders with Logo

1½″ spine, for 8½″ x 11″ pages (white with grey print; vinyl) **$2.95**

2″ spine, for 8½″ x 11″ pages (white with grey print; vinyl) **$3.50**

1″ spine for 5½″ x 8½″ pages (white with grey print; vinyl) **$2.50**



CompuServe Information Service System Configuration Wall Chart

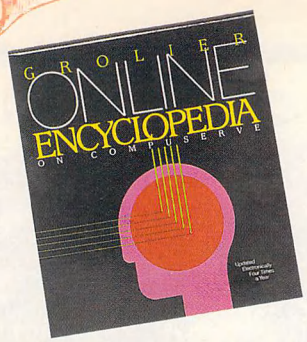
This 35″ x 33″ poster (5/88 version) depicts all screens appearing on the Top Menu and all screens accessible from those initial choices. Extremely helpful for Information Service navigation.

$3.95

CompuServe Logo T-shirt

Announce your role as one of the leaders. Display your online allegiance to the nation's leading information service with this cotton/poly T-shirt silk-screened with the CompuServe logo. Available in light blue, navy blue and red.

$7.95



Back Issues of *Online Today*

Online Today magazine's back issues represent an archive of incisive articles tracking the evolution and impact of computer information and communication. Use a list of feature articles from back issues, provided online, to obtain volumes missing from your set, or to select issues of interest published before you became a subscriber. (Quantities for some issues are limited.)

Reg. $2.50 Save $1.00 $1.50

Grolier Online Encyclopedia Subscription Kit

The Grolier Academic American Online Encyclopedia is ideal for students of all ages. The Grolier Subscription Kit features a one-year renewable subscription to the Grolier Online Encyclopedia, plus a membership to CompuServe, a $15 usage credit and complete Grolier and CompuServe Users Guides.

Reg. $49.95 Save $10.00 $39.95

CompuServe Wrist Watches

These distinctively smart and incredibly accurate timepieces complement nearly any attire—business or casual. With Swiss movement and Quartz drive, each watch is guaranteed accurate within two minutes a year. Aesthetically pleasing with cut gold-finished hour indicators over a brushed satin face, displaying the attractive CompuServe logo. Plus a genuine grained ebony leather strap. Available in Men's or Women's edition.

CompuServe holiday price $29.95

VIDTEX Terminal Communications Software

Link-up to the CompuServe Information Service with custom CompuServe VIDTEX communications software. Whether you have an Apple™, Atari™ or Commodore™, you'll get the ideal connection with VIDTEX. (Complete information about VIDTEX compatibility requirements is available online: GO VIDTEX). Only CompuServe gives you such a complete communications software package that includes:

- FREE software updates online
- error-free uploading and downloading
- low- and medium-resolution graphics
- automatic log-on and menu navigation
- programmable function keys
- capture buffer
- adjustable communication settings
- cursor positioning
- support of Hayes-compatible modems

VIDTEX works with the Atari 800, 800 XL, 600 XL with 64K, 1200 XL, 65 XE, 130 XE, the Apple II Family, Commodore 64, TRS-80 Model III and Color Computer.

$39.95

British Legends T-Shirt

As you traverse the unfamiliar lands of British Legends, clad yourself in this attractive British Legends T-shirt. It's a great way to outwardly display your enthusiasm for this exciting role-playing game. Only available in red.

$7.95

FREE!
With qualifying purchase of $25.

CompuServe Information Service System Configuration Wall Chart

As a special incentive to place an online order during the Fingershopping Sale, any order over $25 placed between October 1 and November 30, 1988 will receive a revised (5/88 version) CompuServe Information Service System Configuration Wall Chart FREE. The chart will be included automatically in qualifying orders. There is no need to enter an order for your bonus item. Detailed descriptions and prices for all products available for Fingershopping can be found online. Enter GO ORDER at any Information Service prompt.

Non-subscribers may order by calling 800/848-8199. In Ohio or Canada call 614/457-0802.

Based on the total price of your merchandise, postage and handling is automatically calculated according to the following scale and added to your total.

Amount	Postage/handling
$0 - $.99	$.50
$1.00 - $14.99	$2.50
$15.00 - $49.99	$3.00
$50 and up	$4.00

Canadian orders must add an additional $2.50 to all orders over $1.00.

International shipments

Amount	Postage/handling
$0 - $14.99	$5.00
$15.00 - $7.49	$50.00
$50 and up	$17.50

CompuServe®

CompuServe Corporate Headquarters
5000 Arlington Centre Blvd.
Columbus, Ohio 43220

Computer Learning Awareness Month

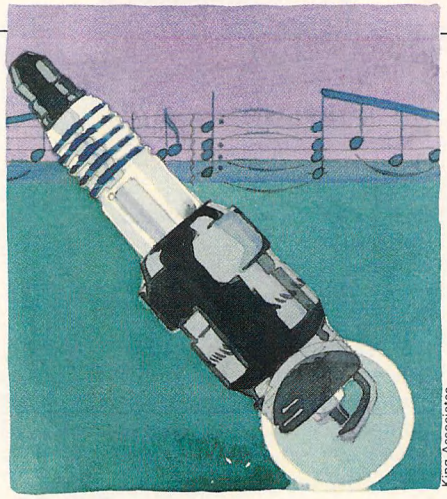
Although it may not be noted on your calendar, October is Computer Learning Month.

The project is aimed at increasing public awareness of how computers are used as educational tools at home, work and school, according to a spokeswoman for Computer Learning Month. The campaign's organizers plan to distribute programs to schools, universities, community groups and other organizations. The goal is to stimulate the innovative use of computers and to promote equal access to computer learning for everyone.

Further details are available by writing to Computer Learning Month, Box 60007, Palo Alto, CA 94306.

You also can discuss Computer Learning Month's issues and goals in CompuServe's many education-oriented forums. Type GO EDU-50 for a complete list.

—John Edwards



King Associates

Quiet Time

Remember the classic American V8 engine? Silky smooth, silent power at the touch of an accelerator pedal.

Many of today's gas-efficient turbocharged four-cylinder engines outperform the V8s of years past. But nobody ever accused a clattering four-banger of being smooth or silent.

This may soon change. Lotus Technology of Norfolk, England (not to be confused with Lotus in Cambridge, Mass.), is developing a computer-controlled system that may make the four-cylinder engines of tomorrow as smooth as the V8s of yesteryear.

Lotus' innovative answer is an Adaptive Noise Control (ANC) system that uses the car's stereo system to reduce perceived interior noise levels by as much as 10 decibels.

The ANC system uses a set of microphones mounted inside the passenger-seat headrests. The microphones pick up the firing sounds of the engine's pistons and feed the information to a dedicated microcomputer in the car's trunk. The computer measures the size and frequency of each piston boom and then sends a similar but out-of-phase digital blast through the car's existing stereo system.

The arrangement may sound a little zany and perhaps typically British, but Malcolm McDonald, chief of Lotus' "noise group," says it works. The idea, according to McDonald, is to smooth the empty intervals between engine noise peaks. When a "white noise" environment is created by filling in the engine's silent periods, the human brain thinks that the car is quieter than it actually is, claims McDonald.

So far, Lotus has tested its ANC system on a three-car fleet: a 2.0 liter Toyota Celica, a Lotus Esprit and a small, inexpensive hatchback that the company refuses to name for fear of upsetting its manufacturer.

Each of the cars has posed unique challenges, notes McDonald. Since each engine's distinct noise reverberates around the inside of the passenger cabin, the microcomputer must be custom-programmed to meet specific car model requirements. But Lotus is confident that the system can be perfected and produced at an affordable price. McDonald estimates that an ANC system could cost as little as $200 by the time it reaches the market in the 1990s. Car manufacturer and after-market user add-on versions are planned by Lotus.

The ANC system was demonstrated at a recent London car show and impressed most listeners, as the company received more than 100 requests for additional information. Most of the world's leading automakers asked for more details, notes McDonald. "We think it has a bright future," he says.

On CompuServe, car information and services can be accessed by typing GO AUTO.

Information Exchange Provides Connections for the Handicapped

While computers have been a boon to the handicapped, understanding the technical details of operating a computer and the sometimes extensive peripherals needed by the handicapped can be challenging. Now free expert assistance is available 24 hours a day on CompuServe.

IBM, realizing the potential its machines have for the handicapped, is funding an online information exchange, called the IBM/Special Needs Exchange, in the Education Forum (GO EDFORUM). The exchange helps users learn about IBM software, services and computers. In addition, there is information on commercial and public-domain educational software for IBM systems, and tips on ways to make that software accessible and useful to individuals with special needs.

The online experts are headed by a team from LINC Resources, a firm nationally recognized for providing information services to the education and special-education communities. Handling the online responses is Georgia Griffith, who is blind and deaf.

The highly interactive exchange is designed to bring together people who are interested in computer and technology applications that improve the education of special-education and special-needs students.

Primarily consulted by teachers, parents of handicapped children, developers and an occasional dealer or software company, the exchange's members are looking for special programs and devices, gradebook handlers and new product announcements. When a program is requested, Griffith and Jack Moore of LINC Resources search the public domain; if nothing can be found, Griffith will often write a program herself.

The exchange is successful largely because of Griffith's enthusiasm for the project. "It's going to thrive if I have to drag teachers one by one to the exchange!" she says.

In addition to the services in the Education Forum, LINC provides several full-text searchable databases through an IBM PC-AT computer, enabling users to download information on educational software, computer applications and related topics.

For information, contact Georgia Griffith in the Education Forum (GO EDFORUM) or Jack Moore, IBM/Special Needs Exchange, LINC Resources Inc., P.O. Box 434, Pawtucket, RI 02862; 401/725-3973.

—Cathryn Conroy

Engineering Program Helps the Disabled

Engineering students and disabled individuals will soon be cooperating in a community-centered program to provide custom-designed new or modified prototype equipment and special computer software for the physically and mentally disabled.

The Undergraduate Bioengineering Design Project, sponsored by the National Science Foundation, is the first research program to bring together students and the disabled for the purpose of creating new inventions. Through this unprecedented collaboration, disabled individuals, whose needs have long been unmet by commercially available technology, may soon enjoy improved educational opportunities and greater freedom of movement. The project also is expected to boost the careers of the students and create contacts between universities and their surrounding communities.

Senior scientists in engineering departments at 15 universities will administer at least 10 of the research projects each year. The National Science Foundation has awarded a total of $379,000 to the universities for the first two years of the program. Based on the success of these first projects, more than $578,000 may be made available to the same institutions for an additional three years.

"The program will provide invaluable training for the engineering student who designs, builds and implements a device to help a person in need," says Allen Zelman, the program's director. "This 'real world' experience will motivate and foster a sense of purpose and pride for engineering students. The program will support the development of bioengineering programs with engineering schools and will give them an opportunity to offer a unique service to the community."

Under the program, participating engineering faculties will work with administrators at institutions that provide care or education to the disabled to identify projects for which no other funding source exists. The engineers will then select students to carry out the research. The average cost of each project will be less than $500. Every year, each university will enter one student's design in a professional society-sponsored competition.

Further details on the program are available from the National Science Foundation, 1800 G St., Washington, DC 20550.

On CompuServe, bioengineered products are discussed in the Disabilities Forum (GO DISABILITIES).

—John Edwards

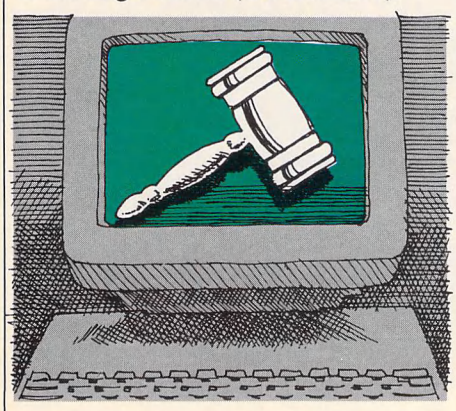
Computer Counsel

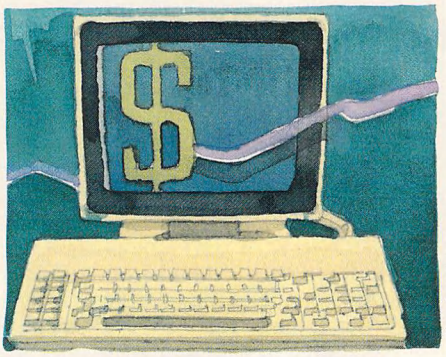
It has taken more than a decade, but most lawyers have finally entered the computer era.

The American Bar Association recently polled selected readers of its *ABA Journal* on various computer and communications topics. The survey found that 90 percent of responding law firms own or lease computers. A similar poll, taken in 1987, discovered that only 78 percent of law offices were computerized.

The survey also uncovered an unsurprising fact: lawyers love telephones. The ABA notes that the average attorney makes about 55 business phone calls per week. But lawyers are also taking advantage of new telephone technology—almost one-third of all lawyers now have car telephones.

On CompuServe, attorneys gather in the Legal Forum (GO LAWSIG).





King Associates

Compact Corporations

Standard & Poor's, long recognized as the authority on business information, has compiled three of its databases on a single CD-ROM disk.

Called *Corporations*, the compact disk provides information on 9,000 public US companies, 35,000 private and subsidiary companies, and 70,000 key executives in US industry. The databases include Standard & Poor's Corporation Records, Poor's Register of Directors and Executives, and major portions of Poor's Register of Corporations. Selected financial data from Standard & Poor's Compustat Services are also included.

Company information includes corporate background, balance sheet and income statement items, historical earnings, stock and dividend information, and a list of officers and directors. Standardized comparisons and screenings for most public companies can be performed.

The disk costs $4,250. Updated disks are sent six times a year. For information, contact Standard & Poor's Corp., 25 Broadway, New York, NY 10004; 800/233-2310 (nationwide) or 212/208-8737 (in New York).

Similar information is available on CompuServe from Standard & Poor's, including the S&P Recommended Master List, investment ideas, company profiles and the S&P 500 Index and Directory. To access it, type GO S&P.

—Cathryn Conroy

Get Computer Industry News

Online Today Daily Edition's Monitor section keeps you abreast of the latest computer and information industry news. Stories are added several times each day and the hot items are highlighted on our front page, OLT-1. A week's worth of recent news is always available for review (OLT-20). To read today's news, type GO OLT-90 at any CompuServe Information Service prompt.

***MONITOR DAILY NEWS**	**OLT-160**
About Monitor	**OLT-359**
Behind the Screens	**OLT-130**
Calendar of Events	**OLT-1000**
Headlines	**OLT-1**
Recent News	**OLT-20**
Reporting News to Us	**OLT-352**
Special Reports	**OLT-2000**
Today's News	**OLT-90**

How to Get The Most Out of CompuServe

Permanent Until Further Notice

by Charles Bowen and David Peyton

People get confused about computers when the technology introduces new concepts that don't quite fit their older names.

In the Real World, for instance, the words "permanent" and "temporary" have precise meanings. A thing is permanent if it is constant, unalterable; temporary things are momentary, provisional. As far as English and logic are concerned, the difference comes down to whether the thing in question can be changed.

Computers, however, have introduced new ideas: "permanent" things that can be changed and "temporary" things that might remain unaltered or might change in the next minute. The concept, sandwiched between those Real World definitions, is: Some things are "permanent" until the user changes his or her mind about them, that is, "permanent until further notice."

In the CompuServe world, these new definitions of permanent and temporary are most evident in the way "defaults" are handled. Defaults are simply the particulars of how you want text received from CompuServe to be displayed on your screen. Recorded in the system for each CompuServe member, default settings deal with such things as the number of characters and lines the screen can accommodate and whether the user wants the screen cleared after each page of information. In other words, most defaults represent either your computer's physical dimensions or your choice of the display.

So how does CompuServe know what defaults to record for you and every other member?

You may remember that the first time you logged onto CompuServe, the system prompted with several questions about your computer, including queries about the dimensions of your screen and about your communications software. Later the system stored these defaults.

Suppose that during this initial questioning you told CompuServe that your screen could hold up to 25 lines of 80 characters each. Saving this information, the system from then on would routinely send its data to you in "pages" of no more than 25 80-character lines at a time. This becomes your "permanent" screen size defaults.

Of course, to CompuServe this is a special meaning of permanent—"permanent until we change our minds again." In a later column, we'll talk about an important area of the system where such permanent settings can be revised. For now, though, let's focus on the flip-side of this concept, temporary changes to the system.

Any "permanent" default can be changed temporarily, that is, changed for the current online session only. To make such temporary changes we can use an important systems command called Set. The Set command can be entered at virtually any CompuServe prompt.

Imagine that you've bought a second computer that you plan to use online occasionally. Perhaps it is an older laptop machine that has a screen size different from the 80-character, 25-line system with which you usually log on.

You'll see the problem as soon as you access the system with your laptop and begin reading text. CompuServe, assuming you're using your old machine as usual, sends you 80-character lines. However, if your laptop can accommodate only 32 characters per line, your screen displays a mixture of full and partial lines. Also, some lines end in the middle of words, making it difficult to read.

To fix the situation, you could permanently change your screen line defaults (using the feature we'll talk about next month). However, since you plan to use the laptop only occasionally, you want to make the change for the current session only.

This is a job for Set. At any prompt, you can enter the Set command followed by a subcommand and then an argument. In this case, type SET WIDTH 32 and press the Return key.

This tells the system, "Set the screen width to 32 characters for now." From then until the end of the current session, text will be displayed in 32-character lines. Of course, at any point, you could temporarily change it again. Typing SET WIDTH 64 would cause 64-character lines to be transmitted. CompuServe is set up to transmit lines ranging from 10 characters to 255 characters, all controlled by the Set command. All subcommands can be abbreviated to their first three letters, so you could enter the commands as SET WID 32 or SET WID 64.

Suppose, too, that your laptop can hold only eight lines on a screen, much shorter than the 25-line capability of your first system. Under your existing defaults, CompuServe is prepared to send you screen "pages" of 25 lines of data—17 more lines than your present screen can hold. That means that when you're using the laptop, much of the text will scroll off before pausing with a "MORE !" prompt. The Set command can solve that problem, too, by typing SET LIN 8, followed by the Return key. This tells CompuServe, "Set the number of lines to 8."

The Set command can be used to change a large number of parameters. For instance, you've seen how CompuServe usually presents its data in pages of information. This means that displays of information pause from time to time with the "MORE !" prompt, allowing you to catch up on the reading. However, if you decide that you temporarily do not want pages of information—if, for instance, you are capturing incoming data to a disk file or printing it as it arrives—you can type SET PAG OFF.

This means "turn off the page options for now." Then for the current session there would be no "MORE !" interruptions. To resume the paging feature, the command is SET PAG ON.

The Set command also enables you to temporarily switch (or "toggle") between brief and verbose modes for commands. Most users who are new to the system want as many menus and full prompts as possible while they're learning the system. However, as they

Read Online Columns

When you want to read opinions behind the latest computer and information industry news, turn to *Online Today Daily Edition's* Columns. You'll find insights, witticisms, user tips and more by leading computer journalists. To read any of the columns, type GO OLT-110 at any CompuServe Information Service prompt.

COLUMNS	OLT-110
Ask Dr. John	OLT-3200
Behind the Screens	OLT-130
Calendar of Events	OLT-1000
Columns by Gutman	OLT-175
HTGTMOOC Tutorial	OLT-3400
Uploads Updates	OLT-3700

become more comfortable, they sometimes want to save online time by turning off repetitive menus. To do that, type SET BRI ON. Meaning "Set brief mode on," this command causes the system to suppress display of many of its verbose menus and command prompts.

Because they're temporary, Set commands offer an excellent way to find out if you're ready to navigate the system without so many menus. You can turn on brief mode for the current session and see if you can find your way around the system. If the experience illustrates that you are not quite ready, you can type SET BRI OFF at any prompt to return to the menus. On the other hand, if you find that brief mode is not intimidating, you can visit the terminal settings area we'll discuss next month and make brief mode your new permanent default.

Another handy use of the Set command is to temporarily change terminal types. CompuServe recognizes a dozen different "terminals," allowing the system to interact with features of some specific communications software. For instance, the system can be informed that you're using VIDTEX-compatible software (CompuServe's communications program), a VT100 or VT52 emulator, NAPLPS or ANSI, or "other" for a "plain-vanilla" transmission.

Suppose you usually access CompuServe from your office using a communications program built around CompuServe's VIDTEX protocols, such as The Professional Connection. Your permanent default for terminal type is VIDTEX, signaling the system to take advantage of that software's features.

However, perhaps you also occasionally log on under the same User ID number from your computer at home using a different communications program, say, Digital Communication Associates' Crosstalk software. To get the most out of your evening session, you could temporarily change your terminal type to one recognized by Crosstalk, such as a VT100 emulation, by typing SET TERMINAL VT100.

If you're unsure how a default is currently set, you can type SET and the parameter you're interested in. For instance, if you type SET WID, CompuServe will display this:

```
******************************
Current WIDTH = 80. Enter WIDTH
[10-255] :
******************************
```

This tells you the current width setting (80 characters) and gives you an opportunity to change it. The data in the square brackets is the minimum and maximum allowable settings.

Remember that changes you make with the Set options are temporary in the new sense of that word: They are in effect for the current session only. Once you log off, the system "forgets" them and, the next time you connect, CompuServe sets you up with the parameters listed as your defaults.

Charles Bowen and David Peyton co-authored How to Get the Most Out of CompuServe *and* CompuServe for IBM PC Power Users. *Bowen's CompuServe User ID number is 70007,411 and Peyton's is 76703,244.*

SERIOUS ABOUT
SPORTS?

GET IT ALL WITH
COMPUTER SPORTS WORLD

America's oldest and largest sports and horseracing database with over 4200 files of computerized information.

AT YOUR FINGERTIPS!
24 HOURS UP TO THE MINUTE

Scores In Progress • Weather
Transactions • Injuries • Team Logs
• Fantasy Stats •

Call now and speak to a representative for your demonstration account number and password.

1-800-321-5562 CSW® COMPUTER SPORTS WORLD

A service of The Chronicle Publishing Company, San Fransisco.

Go CSW for a sample of the services Computer Sports World provides.

GO OLI for more information.

Fax Messages Worldwide

EasyPlex-Fax Link Expands Communication Possibilities

by Cathryn Conroy

The president of a small engineering firm specializing in industrial research has been anxiously waiting for the company's attorneys to finish reviewing a hard-won government contract. This is the job he hopes will transform the fledgling firm into a powerhouse. But nothing will come of all the blood, sweat and tears his half-dozen employees put into the winning proposal if the contract isn't halfway across the country by 5 p.m. And it's now 4:02.

The executive isn't worried. He is confident the attorneys will soon finish crossing the t's and dotting the i's, and he'll then send that contract thousands of miles by uploading it to his EasyPlex electronic mailbox on CompuServe and sending a hard copy of the crucial contract via the EasyPlex-fax link.

This new service allows users to send messages to facsimile machines worldwide—with more convenience and efficiency than hard-copy transmission—and without having to bear the expense of owning a fax machine. And those who do own fax machines may still find CompuServe's service to be less expensive and less time-consuming.

The EasyPlex-fax link is easy to use: Simply compose a text message—be it a letter, contract, sales report, investment document, purchase order, resume and cover letter, any text document that you may have already composed using your personal computer, or other document that needs the immediate attention of special delivery—and upload it to EasyPlex. (It can also be composed online if you prefer.) At the send prompt enter the following:

```
>FAX XXX-1234567
```

XXX represents the area code of the fax machine you are calling, and 1234567 stands for the telephone number. Be sure to put a space after the word fax and a hyphen between the area code and telephone number. You must be sure to insert the area code, even if the facsimile is being sent to a destination within your own area code.

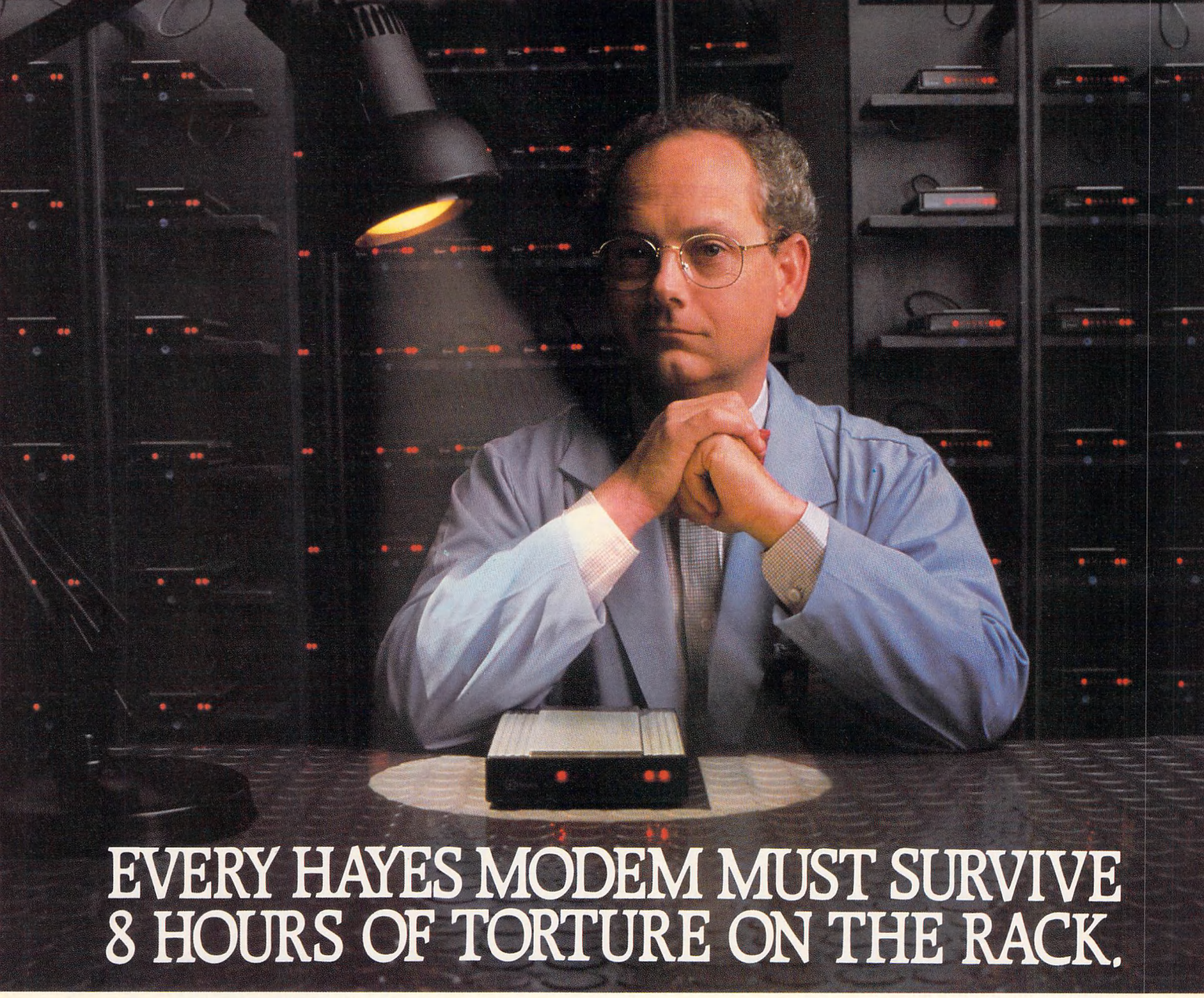
After you press the Return key, you'll receive online notification that the message has been sent. At that point, the CompuServe computers translate the message to a fax format and automatically dial the fax number. If the number is busy, CompuServe will try several more times. If you sent the message fax to fax, you would be the one dialing the phone until you could get through; when the message is sent via EasyPlex to fax, CompuServe does the work for you.

You'll receive final notification in your EasyPlex box when the message is transmitted. If for some reason the message cannot be transmitted (for instance, the telephone number may not be in service), the message will be returned to your EasyPlex box.

In most cases, the cost is equivalent to a long-distance telephone call (which you would have to pay if you sent the message yourself on your own fax machine) and significantly less than an overnight delivery service. Messages sent to fax machines in the United States, including those to Alaska and Hawaii, cost 75 cents for the first 1,000 characters and 25 cents for each additional 1,000 characters. That means, a message with 1,703 characters, for example, costs $1. International rates are based on the destination country and the length of the message. A rate sheet is available in EasyPlex by typing HELP FAX INTERNATIONAL.

Fax transmissions are gradually replacing Telex in the business community, because they are easier and faster to use. Currently, there are twice as many fax machines worldwide as there are Telex machines. (More than half of the world's 4.5 million fax machines are in Japan, making international communications with the Japanese easy and efficient.) While Telex transmissions require continuous online time and can be sent only at 1200 baud, fax messages can be composed ahead of time, uploaded and sent at 9600 baud. Delivery is fast and reliable. In addition, the transmitted fax message is received in a clean, readable format with upper- and lowercase letters—exactly as you composed it.

For information on the new EasyPlex-fax link, type GO EASY and at any prompt within EasyPlex, type HELP FAX.



EVERY HAYES MODEM MUST SURVIVE 8 HOURS OF TORTURE ON THE RACK.

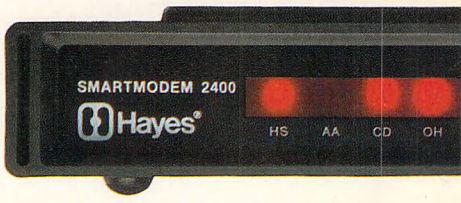
The Rack. It's 8 straight hours of burn-in testing. Yet only one of many trials every Hayes modem must go through before it's packed and shipped.

In all, there are over 20 tests and inspections for quality and reliability. Thus allowing us to offer the most comprehensive performance warranty in the business.

Today, while all too many manufacturers are content to perform only the most perfunctory tests on their products and then only on a random basis, we believe in testing all of our modems.

With no exceptions.

At Hayes we've been making dial-up data communications as common and as reliable as ordinary phone calls for over a decade. Whether PC-to-PC, PC-to-Host or PC-to-LAN, Hayes has set the standards.



And we intend to let nothing lower those standards. Especially one of our own modems.

For your nearest Hayes dealer, call **800-635-1225**. Hayes Microcomputer Products, Inc., P.O. Box 105203, Atlanta, GA 30348. Hayes®

© 1988 Hayes Microcomputer Products, Inc.

GO OLI for more information.

Wealth of Resources in Investors' Library

by Carole Houze Gerber

Forum libraries provide a rich source of information for making investment decisions. The Investors' Forum, in particular, offers a variety of files compatible with many types of hardware.

"Because we are not a machine-specific forum, we have program files for IBM and compatible computers, Apple IIs, Macintosh, CP/M, Commodore and even a few files for Radio Shack Models 1 and 3," says Harry Knutowski, Investors' Forum librarian. "To help members easily find library files that will run on their computers, we've developed a keyword search criteria and a file extension naming criteria. Type ANN at any prompt to read the directions in the forum library announcement."

Forum Administrator Mike Pietruk offers this advice on downloading files: "Many users experience problems downloading files because they don't know which downloading protocol to use—Quick B, XMODEM or capture buffer, to name a few. It's essential for everyone to read the section on transferring files in their owners' manuals before downloading. For more information on downloading, type HELP DOWNLOAD at any LIB# prompt. It's a breeze once you're familiar with the capabilities of your software."

Most of the forum's libraries contain information textfiles as well as public-domain shareware/software—the latter mainly for IBM-compatible machines. The major forum libraries, with examples of their shareware holdings, are:

- **Library 1—Stocks/The Market**

Library 1 contains some of the more popular shareware programs. Among them are PFROI.ARC for IBM and compatible computers and STKPG2.BNY for Apple IIe and IIc machines.

PFROI computes the before and after tax rate of return on investment on portfolios and securities. It also handles stocks, bonds, mutual funds, CDs and depreciable assets.

STKPG2, a system file in binary two format, is a comprehensive stock portfolio tracking, reporting and graphing system. Read STKPG2.DOC before downloading this system file.

Also in Library 1 are two programs for IBM and compatible computers focusing on fundamental stock analysis. EQDUR.ARC, an equity duration model from Dan DiBartolomeo of the Boston Computer Society, examines the relationship between price movements in stocks and movements in interest rates.

Another DiBartolomeo program is OPT.ARC, a utility that optimizes a portfolio in terms of a stated goal such as long-term growth.

- **Library 2—Bonds/Fixed Income**
- **Library 3—Options Trading**
- **Library 4—Commodities/Metals**
- **Library 5—Mutual Funds**
- **Library 6—Real Estate**

Library 6 features a shareware program for IBM and compatible machines called ANLYST.ARC, which is helpful when financing a home.

Another simple program in Library 6 for calculating home loans is LOAN.APP for use on all Apple II computers.

- **Library 7—Financial Planning/Retirement Funds**
- **Library 8—Theory/Commentary**
- **Library 9—Computer Corner**
- **Library 10—New Uploads/Help**

Files placed in Library 10 stay there for 30 days so members can browse using the Age parameter for the most recent uploads. The files are then moved monthly to their "home library."

Especially popular in Library 10 are columns by Charles Lalogia, a nationally known author of market letters. New columns are placed in Library 10 biweekly. To read Lalogia's latest column, type "brow logg*" at the Enter Choice prompt. To read previous columns, download LALOGG.ARC.

- **Library 11—Forum Usage Hints**
- **Library 12—Charts/Technical Analysis**

Library 12 is for the discussion and display of RLE (run length encoded) graphs in particular and all aspects of technical analysis in general. Users need RLE capability in their communications software to view charts in this library. Professional Connection for the IBM and compatibles is one of these programs, but HOST20.ARC, located in this library, can also be used. It is a public-domain file for the IBM family of computers.

To download the charts in this library for offline viewing, use the MS-DOS file RLEDIS.EXE or see the RLE.APL file for help with the Apple family of computers. "The forum libraries in the Investors' Forum are set up to facilitate their use," Knutowski says.

To access the Investors' Forum, type GO INVFORUM at any prompt.

Business Briefs

SIC Codes Online

Primary Standard Industrial Classification codes can now be accessed from CompuServe's Company Analysis menu.

SIC codes—federally designed, standard four-digit codes used to identify companies by industry—are used in many computerized databases including COSCREEN and SCREEN on CompuServe. SIC codes help to identify companies and competitors within specific industries and can be used as valuable screening criteria.
GO ANALYSIS

News-A-Tron Posts Daily Updates

News-A-Tron now provides daily updates of foreign exchange market pricing with helpful background summaries of economic and political trends affecting foreign currency.

These foreign exchange figures provide US dollar values and the relative value of foreign currency. The figures may be used to compare one foreign currency to another, given the common conversion figure in US dollars.

The database will be updated twice daily with current market prices. News-A-Tron also offers daily-updated commodities information. GO NAT

Could *Your* Business be Affected by Happenings in the Computer World Today?

Find out in *Online Today Daily Edition*. GO OLT-90 from any prompt on the CompuServe Information Service to get daily-updated computer news.

ONLINE TODAY

Health Hints in Forums

The libraries in CompuServe's forums are filled with thousands of programs and textfiles. The following are a few of the files uploaded to the forum libraries in recent months. For a weekly list of uploads, check the "Uploads" columns in *Online Today Daily Edition*. GO OLT-3700.

AAMSI MEDICAL FORUM
(GO MEDSIG)

Health Quiz—*The Game of Your Life*, a health game that assesses weight, estimates life span based on lifestyle, and gives healthful suggestions and medical quotations. Includes sound effects and graphics. For IBM PCs and compatibles. File LIFEGA.ARC in Library 12.

Wellness Program—Health Probe Executive Health Analysis demonstration for IBM PCs and compatibles. Collects and analyzes medical history and suggests preventative measures. File HEALTH.ARC in Library 16.

ALDUS FORUM
(GO ALDUS)

Browser—A shareware MS Windows application designed to enable users to view files in a variety of formats including ANSI, ASCII, 7- and 8-bit bytes and as a hex dump. Features include printing and clipboard update capabilities. File BROW26.ARC in Library 11.

AQUARIA AND TROPICAL FISH FORUM
(GO FISHNET)

Salt-water Basics—Introductory information on maintaining a salt-water aquarium, prepared by the Marine Education Center, a branch of the Gulf Coast Research Laboratory. File SALT.TXT in Library 1.

ASHTON-TATE FORUM
(GO ASHFORUM)

Time Is Money—Version 2.1 of the shareware time-and-expense billing and accounting system written in dBase III+ and compiled with Quicksilver compiler. Requires 490K of memory and hard disk. File TIM21.ARC in Library 2.

ASTRONOMY FORUM
(GO ASTROFORUM)

Moondate—A BASIC program written for the Atari 8-bit computer to determine the day of the week, Julian date and phase of the moon for dates between 4000 B.C. and 8000 A.D. File MOONDA.BAS in Library 7.

ATARI 16-BIT FORUM
(GO ATARI16)

Baseball Simulator—A strategic baseball game simulator from the manager's perspective (hitter by hitter rather than pitch by pitch). Full GEM implementation, color or monochrome screens. File BASBAL.ARC in Library 1.

AUTODESK FORUM
(GO AUTODESK)

Memory Mapper—MAP.COM, a utility that supplies a memory map of memory-resident programs and free memory. File MAP.ARC in Library 9.

COMMODORE MUSIC, GRAPHICS AND GAMES FORUM
(GO CBMART)

Attack Game—A *Zaxxon*-like public-domain game for the Commodore 64. File ATTACK.IMG in Library 8.

COMMODORE COMMUNICATIONS FORUM
(GO CBMCOM)

Docu-Print Version 3—A display-and-print utility for the Commodore. Helps you to resume printing in case of power failure. Provides form-feed and perforation skipping and ASCII conversion. File DOCU3.ARC in Library 6.

COLOR COMPUTER FORUM
(GO COCO)

Text Editor—CoCoWord Text Editor version 1.1, a simple line-oriented editor for the CoCo3. File CCWORD.BAS in Library 11. See also CCWORD.DOC, documentation for the program, in the same library.

CONSUMER HEALTH FORUM
(GO GOODHEALTH)

Morning Sickness—Recommendations from a childbirth educator on ways to deal with the morning sickness of pregnancy. File MORNSI.THD in Library 8.

EDUCATION FORUM
(GO EDFORUM)

Gradebook Program—Version 2.40 of the Aeius Gradebook Program. Runs on IBM PCs and compatibles. Requires 128K, one diskette or hard disk. Tutorial and manual included. File AEIUS2.ARC in Library 2.

GAMERS' FORUM
(GO GAMERS)

Adventure Game Tool Kit—Development system for creating adventure games and playing the games you create. For IBM PCs and compatibles. Files AGT.ARC and AGT-DO.ARC in Library 1.

GENEALOGY FORUM
(GO ROOTS)

Help with German—Three form letters that can be used for requesting genealogical records from German churches, archives and genealogy societies. File GERMAN.LTR in Library 6.

IBM HARDWARE FORUM
(GO IBMHW)

Disk Formatter—QFORMAT enables you to format a disk in drive A without leaving a program. File QFMT.ARC in Library 1.

IBM NEW USERS' FORUM
(GO IBMNEW)

Math Drills—Math Quizzer, a flashcard-style math game to encourage students in grades one through six to do mental computation of simple math problems. File QUIZZE.ARC in Library 9.

IBM SOFTWARE FORUM
(GO IBMSW)

Best in Finance—PCLOANS, a financial program that *Computers in Accounting* magazine calls the best. Amortization program, loan calculator and 10 pages of screen help. File PCLOAN.ARC in Library 5.

LEGAL FORUM
(GO LAWSIG)

Law Office Help—Release 2.0 of Docket, for IBM PCs and compatibles. A docket-keeping program for a firm or individual lawyer. Calculates due dates based on input or preset criteria. File DOCKET.ARC in Library 5.

MAUG APPLE II/III FORUM
(GO APPLETWO)

Space Counter—A subroutine for Apple computers that catalogs, counts blocks and will test for enough space to copy programs to a RAM disk. File BLOCKS.BNY in Library 3.

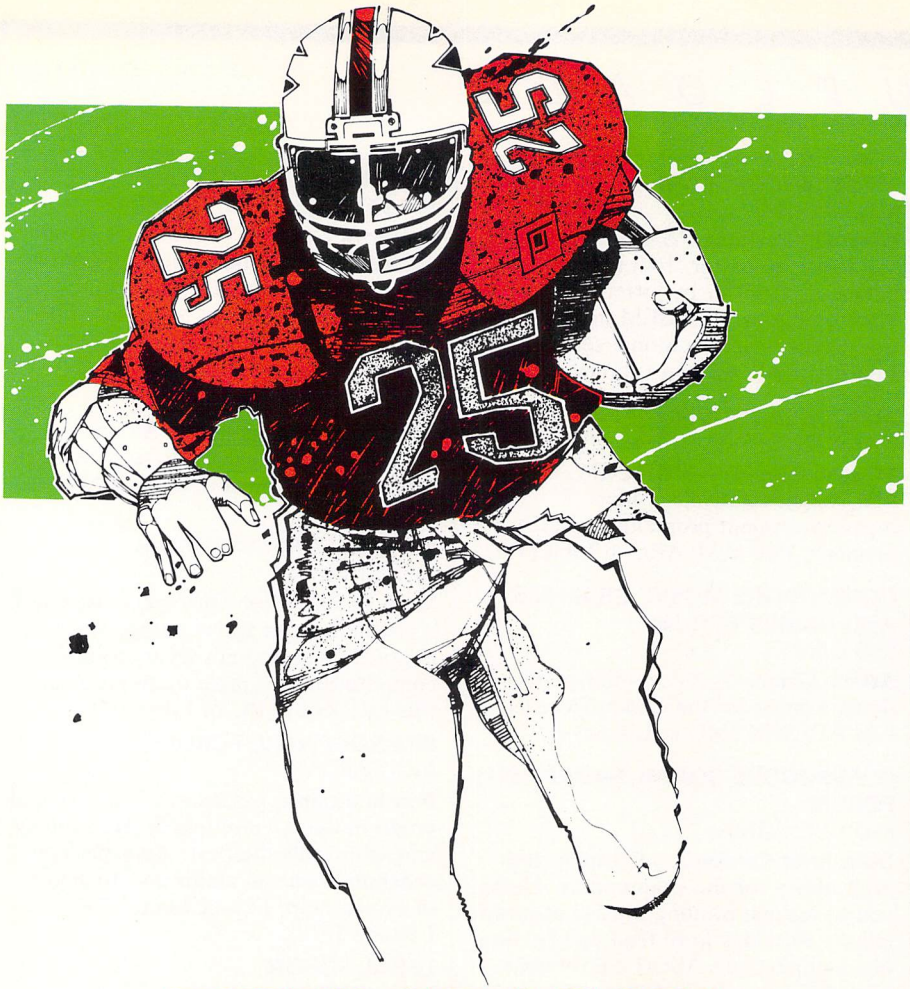
MAUG HYPERFORUM
(GO APPHYPER)

Label Printer—A HyperCard stack that prints multiple labels with any combination of return address, mailing address, logo or attention note. File LABEL.SIT in Library 14.

PC VENDOR SUPPORT FORUM
(GO PCVEN)

Transfer Program—Version 1.2 of ZIP, a super-fast serial file transfer utility for IBM PCs and compatibles. Sends files at 115,200 baud over an ordinary serial cable between two PCs. File ZIP121.ARC in Library 10.

David Peyton co-authored How to Get the Most Out of CompuServe *and* Advanced CompuServe for IBM PC Power Users. *His CompuServe User ID number is 76703,244.*



THIS SEASON, LOG ON TO KICK OFF.

Hey, sport! Turn your computer into a gridiron with CompuServe's online football games. Pick a team name. Organize offensive formations. Call plays. Short pass? Tricky run? Quick kick? Punt? Coach, it's your call.

Sound like a winner? Huddle up. To play CompuServe Football, just enter GO FOOTBALL at any ! prompt. You specify the type of play; we determine the results.

Or, to address more sophisticated aspects of the game, there's the Advanced Digital Football League. Enter GO ADFL at any ! prompt for a simulation that includes timed quarters, a time clock, time-outs, a variety of play formations (you can also create your own) and an online Assistant Coach (whose advice you're welcome to ignore)!

CompuServe®

An H&R Block Company

Kickoff the Season: Fast-breaking Football News Offered in ENS

by Cathryn Conroy

Michael Fink was 11 years old when he first saw the Miami Dolphins play football, and he has been a diehard fan ever since. Nicknamed "Shula," after the Dolphins coach Don Shula, Fink, 28, recalls that after the team's undefeated 1972 season, "They were such a strong team, it didn't take me long to really get hooked."

Fink's family-room walls are covered with autographed 8-by-10 photos of such Dolphin all-stars as Griese, Csonka, Marino and Duper. And he owns just about every type of clothing made with the Dolphin logo, perfect attire for all the home games he attends with family and friends. He even traveled to San Francisco the last time the Dolphins played (and lost) in the Super Bowl. "Great time, terrible game," he laments.

Fink takes his Dolphin fever even one step further. He became a CompuServe subscriber more than two years ago for the sole purpose of getting fast-breaking sports news, especially news of his beloved 'phins, from the Executive News Service. Since joining CompuServe, he has discovered the Sports Forum (GO FANS) and is now an enthusiastic player of Fantasy Football.

"The main reason I use ENS is to clip any stories about the Dolphins or the Braves, who I also follow," he says. "The best way to phrase it would be 'ENS gives me tomorrow's news today.'"

The Executive News Service, with access to the Associated Press Sports wire, offers football fans (of all teams) the latest scores, interviews, game plays, injuries, trades and more before they hit the evening television news or tomorrow morning's paper.

The easiest way to get all the sports news you want is to set up a "clipping folder" in ENS. By following menu-guided instructions, it will take only minutes to set up the folder, and you can be sure to have all the sports news you crave waiting for you when you want it.

To set up your own football clipping folder, type GO ENS. A menu of four options appears, including an introduction to the Executive News Service (must reading for first-time users); a review of current news; a review of

late-breaking news; and the opportunity to create, change or delete a folder.

Once you choose Option 4, you'll be presented with another list of options that will enable you to create a clipping folder, change a folder, delete a folder or list a folder. In this case, you'll want to create a folder, so select Option 1. The system then asks you to give the folder a name (there is a 10-character maximum). Good names for the folder might be FOOTBALL or COWBOYS (or whatever team you are following). Next, you are asked to list an expiration date for the folder as well as the number of days you want to retain "clipped" stories (from one to 14 days).

The system asks you to select the publications from which you want stories clipped. The ideal source is AP Sports, which is Option 2 on the menu.

The last and most difficult part of the process is devising appropriate and effective keywords the computer will use to search stories on your team. If your keywords are too broad, such as FOOTBALL, you'll get hundreds of stories in just hours, far too many to be of much use. If the keywords are too narrow, such as LANDRY, you're bound to miss important articles, because the only ones clipped will be those specifically mentioning this coach of the Dallas Cowboys.

So before you get online to set up the football clipping folder, take a few minutes to prepare your keyword strategy. Some keywords that might work well would be DALLAS COWBOYS (TEXAS+FOOTBALL would give you stories on all of that state's football teams). For more hints on creating keywords, type HELP KEYPHRASES at the ENS menu prompt.

ENS is also useful for keeping track of your college alma mater's gridiron players, especially since many local newspapers don't offer coverage beyond scores of distant collegiate teams. So if your heart is still in Iowa but your home is in Ohio, the keywords IOWA +HAWKEYES will take you back to the good ol' college days with today's news of the team's wins.

By typing in EXPANDED FOOTBALL GLANCE as a keyword, you'll automatically get all of the standings for all of the professional teams, as well as game times and location—before the daily newspapers print that information.

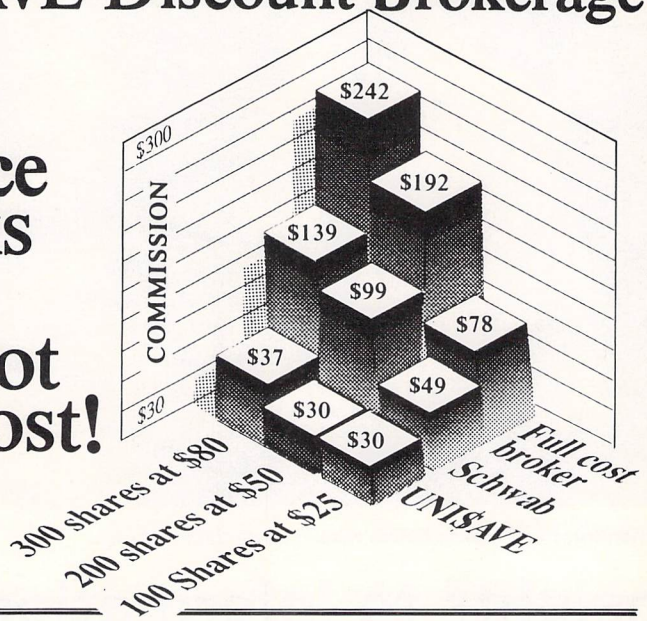
Once the folder is created, ENS will automatically deposit the football news stories into it. When you enter the Executive News Service, the main menu will tell you how many clipped articles are stored in the folder and give you an opportunity to scan just the headlines, glance at the story leads or read the full text of all the stories. You can create up to three folders on any topic.

To access the Executive News Service, you must be a subscriber of the Executive Option.

Cathryn Conroy is a contributing editor of Online Today. *Her CompuServe User ID number is 70007,417.*

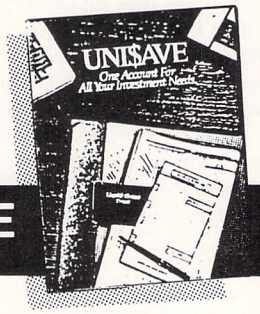
UNI$AVE Discount Brokerage

The service stacks up... but not the cost!



Compare UNI$AVE's rates with those charged by your broker. Our rates are 28% to 75% lower than Schwab and most other *discount* brokers.* And with a UNI$AVE asset management account you have. . .

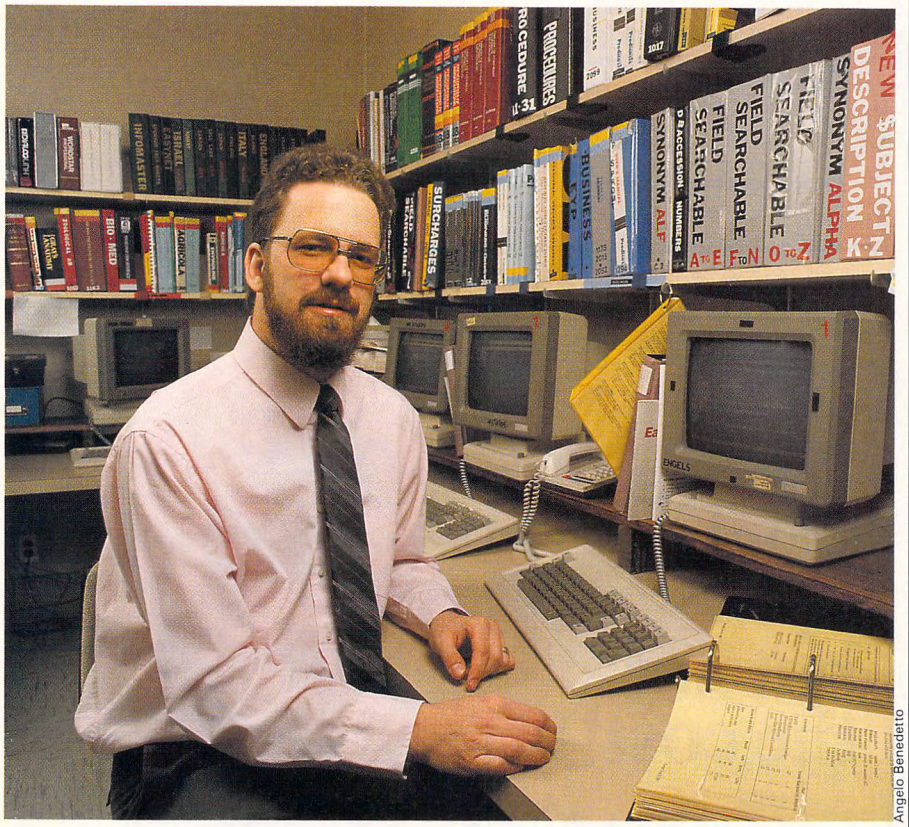
- A broad range of investment choices, including stocks, bonds, options, mutual funds, IRA's, Keogh, tax-exempts and more.
- 24-hour telephone and personal computer access.
- Unrestricted checkwriting with expense coding.
- High, daily money-market income.
- Free VISA access card.



Call 800-UMC-SAVE
(24-HOUR ANSWERING)

UNIFIED MANAGEMENT
429 N. Pennsylvania Street, Indianapolis, IN 46204-1897
One of the MONY Financial Services Companies
*Survey of published rates as of March 1, 1988 MEMBER: SIPC, Midwest Stock Exchange

GO OLI for more information.



Angelo Benedetto

Human interface makes online research friendlier: *Horwitz*

Insights to Information

Reference Librarians Offer Online Assistance

by Cathryn Conroy

At first glance, the greatest difference traditional library research offers over online database research is the comforting presence of a librarian willing to help you find just the right text or journal. But wait! Two of CompuServe's most sophisticated database services—IQuest (GO IQUEST) and PaperChase (GO PCH)—also offer the assistance of professionally trained librarians. This service is much like having the public library reference room right in your own home.

IQuest

IQuest's online help service is called SOS. By typing SOS at any command access prompt within IQuest (wherever you see the IQuest arrow with a C for commands above it), you'll instantly receive online, real-time, personal help from one of 14 professional librarians who are expert in database searching. Such knowledge is appreciated by users, who quickly discover that searching the more than 800 separate databases available through IQuest can be confusing.

These electronic librarians are excellent at answering the toughest of questions, whether it be guiding you through a difficult command sequence (they will spell it all out, step by step so all you will have to do is type in the commands you've been given) or helping you devise an effective keyword-search strategy. It is perfectly appropriate to head to SOS before you conduct any searches, much like you would head for the reference librarian at the public library before you attempt research there.

SOS is simple to use. After you type in SOS, you'll be told that you are accessing the SOS facility (which is located at the Telebase Systems headquarters in Bryn Mawr, Pa.). Once connected, you'll see a greeting, such as "Hello, this is Karin. How may I help you?" Type in your question when you see the arrow prompt. Don't press the Return key until you are finished asking your question; the system will automatically wrap your words. Once you press the Return key, the computers at the SOS facility will audibly beep, notifying the researcher you are ready for an answer. There is no limit on the amount of text you can type.

Usually, the electronic librarian will ask you questions to clarify what you have said. Obviously, the more specific you are, the better answer you will receive. For instance, one user researching consumer purchase motivations told the SOS librarian only that she was trying to access psychology and sociology databases. The queries the librarian asks you to further clarify your request, known as the "reference interview," are also asked by librarians at public library reference desks.

Once the SOS researcher understands your problem and search subject, she or he will answer the question based on personal knowledge and experience as well as by consulting reference works from the various database producers. "SOS uses the human brain to intermediate between what the user put in and what was sent to the database. For instance, a user might be searching for information on Minute Maid, but doesn't realize it is a subsidiary of Coca-Cola," says Seth Horwitz, the director of user services.

The process is one of shared expertise. Generally, the end user is more knowledgeable about the subject being researched, while the SOS researcher is more proficient in online searching. "As a team, we can come up with a viable approach to digging the information out," Horwitz says.

Here are examples of how the SOS staff helped locate information:

- A user looking for information in popular (and not scientific journals) on environmental problems of the ozone layer was guided to specific files available via IQuest II.
- An educator writing a curriculum on the whole-language approach for kindergarten wanted more information. SOS suggested a relevant database, constructed a search statement and showed the user how to use the field-searching capability to improve results.

SOS is the only facility in the nation that offers online, real-time help. CompuServe subscribers, however, are expert at online communication, according to Horwitz.

"CompuServe users are practiced in this and in many ways they are more proficient than we are in communicating one-to-one in an online environment," he says. For instance, it was from CompuServe users that the SOS staff learned online etiquette, such as to STOP SHOUTING (they had no idea that all caps was a form of online shouting) and to be more communicative online.

To protect your privacy, your identity is not disclosed to the SOS researcher. That, combined with the fact that there is no opportunity for nonverbal communication cues, makes the SOS researcher's job challenging. For instance, if someone asks a question on AIDS, a public librarian would know just from looking whether the questioner was an adult or a 12-year-old. The SOS librarian doesn't have that knowledge and obviously knowing someone's age would affect the kind of answer given.

Some users, Horwitz says, don't believe the electronic librarians are human. (One librarian decided to prove she was a person and not a computer by discussing the meaning behind Beatles tunes to a user.)

"Because we cannot be seen, gratitude is less frequently given," Horwitz says. "We give advice and the user disappears, so we never know if the advice was good. Sometimes the user comes back and tells us, and that is very valuable."

SOS is available 24 hours a day, 365 days a year.

PaperChase

PaperChase is a user-friendly version of the sophisticated but complex Medline database, which is used by medical professionals and information specialists. Developed by physicians at Boston's Beth Israel Hospital, PaperChase is so easy to use that health-care professionals and consumers alike can access medical literature that was once the domain of physicians and research librarians only.

This interactive database is designed to be used without documentation or online help screens. Despite this, there will be times when you'll find you have a question on how to use the system. There are two ways to get an answer. The first is to call toll-free 800/722-2075 (in Massachusetts, call collect 617/732-4800). One of 10 professional librarians or physicians will answer your question weekdays from 8 a.m. to 7 p.m. Eastern time. (If one of the PaperChase researchers is in the office at other times—such as the evening or Saturday—the phone will be answered, so it is worth trying to call if you have a question during off hours.)

If you prefer, you can leave your question online in the comment box on the PaperChase main menu. The questions are read several times daily and answers are sent to your EasyPlex address the next day.

"We encourage people to go online first, since the system is designed for use without any form of telephone or electronic assistance," says Rick Lawson, director of user support services. "Sometimes people think they need help, but they really don't. They just feel more confident if they call us first."

Some recent queries to PaperChase and their answers:

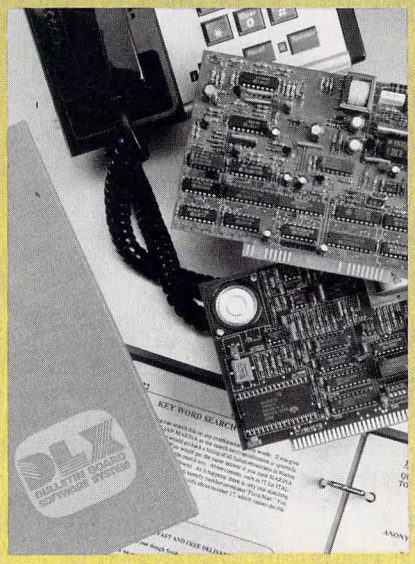
- "How can I find the most recent articles on my topic?" The PaperChase response described how to conduct a date-range search for articles published between 1986 and 1988.
- "Can I exclude references about a subject from my search results?" The PaperChase response described how to use the "logical not" operator, a seldom-used but helpful feature of the PaperChase system, to exclude references containing a specified word or phrase.

Lawson encourages first-time users to carefully read and perhaps download and print the extensive PaperChase instructions available on the main menu.

"We are dedicated to bringing the medical literature to all end users, whether they are a faculty member at Harvard Medical School or a teen-ager doing a research paper for a science class. We will gear the level of help to the user. I don't want to see anyone who uses PaperChase not be able to find something that he or she believes will be of use," he says.

Cathryn Conroy is a contributing editor of Online Today. *Her CompuServe User ID number is 70007,417.*

Give Your PC GREAT CONNECTIONS



We have combined three of our leading telecommunications products to give your IBM PC/XT/AT or compatible computer the added features of a FAX Machine, a Multi-Line Bulletin Board System and a complete Multi-Line Telemarketing and Voice Mail System.

■ **PC/FAX** has features such as pull-down windows, multiple scheduling and Broadcast FAX and runs unattended. Input: scanner or word processor. Output: dot matrix or laser printer. PC/FAX is compatible with all Group III FAX. Hand Scanners available. PC EDITOR'S CHOICE! $289

■ **DLX** is a secure, reliable multi-line BBS that supports up to 50 forums of discussion for any number of users and can run as a free or pay Information Host System. DLX features On-Line Databases, each with key word search capabilities, has an Interactive CB Chat Mode, extensive up- and download options. CALL

■ **PCX** is a *real voice* multi-line Telemarketing System and Voice/Mail Exchange with hundreds of features such as call routing, questionnaires, multiple voice messages, autodialing, remote access, and call forwarding. Optional versions allow one PC to accommodate up to 16 phone lines simultaneously. *From* $269

For a live demonstration of ***PCX****, our Multi-Line Voice Mail Card, call* ***805/654-0721.***

MasterCard DISCOVER

BBS 805/650-0193
Mailing Address
3037 Golf Course Drive
Ventura, CA 93003

PC/WORKS®
Call Now! 24 Hour Order Line
800/543-2439

FAX 805/650-0195
From California & Customer Service
805/650-0188

VISA AMERICAN EXPRESS

Dealer/Distributor Relationships Welcomed

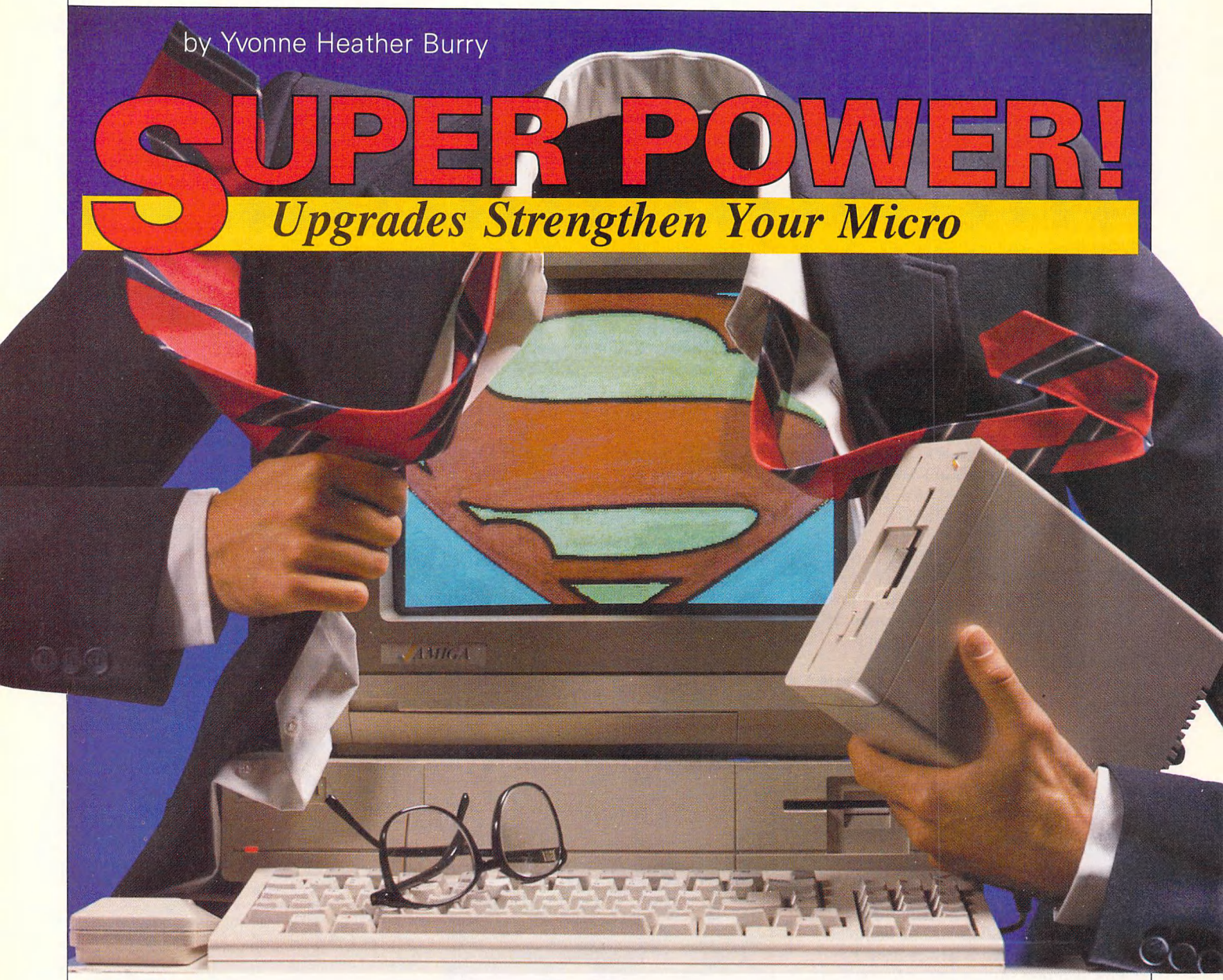
Distributed by the On-Line Store

GO OLI for more information.

by Yvonne Heather Burry

SUPER POWER!

Upgrades Strengthen Your Micro



We live in an era when the machines we buy today are outdated tomorrow. From walkmans to microwaves, our satisfaction level with a machine's performance decreases as we become aware of newer, more sophisticated equipment. And we inevitably want an upgrade.

With personal computers, our options for obtaining higher grade capabilities are more extensive than the simple but financially onerous solution of buying a new machine. Whether it be a need for faster baud rates, scripting capability, greater memory banks or enhanced color graphics, personal computer owners have many avenues to pursue.

The first thing most people want to upgrade is memory. "With the standard computer changing, there are those who, a few years ago, started out with a monochrome 256K IBM computer. Now there is the need to upgrade memory to 640K and beyond," says Sharon Baker, CompuServe product manager for hardware forums and offline software products. "They are also upgrading from regular color graphics to enhanced (or extended) graphics."

This movement is much farther reaching than an IBM trend. In every hardware or software forum, huge amounts of space are devoted to upgrade activities. It might be as simple as adding memory chips so more data can be downloaded from CompuServe, or setting up shop with a big color monitor for uploading, downloading or composing sophisticated graphics.

For many reasons—expense, convenience or just the amount of time available to grow into more sophisticated online and offline techniques—upgrading an existing system is exciting to a large number of computer fanatics. It's like marching into a candy store and having seemingly endless options.

Upgrading a system reflects a natural evolution that affects even the most casual computer user. For some users,

Photographic illustrators

especially "power users" (those who like to parlay into central processors with at least five numbers in the designation), the only way to upgrade is to give the present system to the kids and buy into the state-of-the-art. Here it's a mega-bucks and mega-commitment move.

With the present pace of technology, there are many appealing activities that can be facilitated via upgrades in equipment, both hardware and software. And many upgrade items can help you use CompuServe more efficiently and effectively. Let's look at a few.

Basic Hardware Boosters

Memory, monitors and cards/expansion boards are probably the most frequently upgraded items. The addition of a chip or an expansion memory board can provide the online user with latitude to keep more files offline and process more data offline.

Upgrade trends in monitors move toward color, enhanced graphics capabilities and larger size. And cards/boards are upgraded with such functions as changing clock speed, adding a hard-disk drive, a bus (hard-wired) mouse and parallel ports for printers.

In printers, there is a straightforward direction—to laser printing. While even the least costly laser printers cost at least a half-dozen times as much as a good quality dot-matrix printer, such technologies as desktop publishing have spurred printer upgrades. For those who venture into the laser territory, important features include sharpness (and blackness) of the printed image, speed of output, ability to print on a variety of papers (including "patina" papers needed for direct paste-up in desktop publishing), availability and variety of fonts (typefaces) and the amount of memory (in both processor and printer) needed to allow unimpeded use of the system.

With printers, the options and opinions fly so thick and fast, it's often difficult to know what will provide the desired result. CompuServe's various hardware forums can help answer your inevitable questions.

Kathy Gerber, CompuServe product manager for online computing services, suggests a trip to the appropriate forum with a list of questions: Has anyone found a manufacturer that is reputable? Has anyone found a solution to this specific problem? What's been the experience using certain models together? (See related story.) Check into the Epson Forum (GO EPSON) and the Hewlett-Packard Forum (GO HP).

Other sources of information are Microsearch (GO MSH), where you'll find more than 20,000 articles from computer magazines abstracted along with product literature from 4,500 manufacturers. Updates in hardware and software categories are added online about every two weeks in this database. Also, most hardware and vendor forums post press releases from hardware and software manufacturers.

Along with printers, "the newest rage is page-scanning software," says Atari Forum Administrator Ron Luks. Optical character readers can convert a printed page into ASCII textfiles so they can be uploaded to CompuServe. Although IBM compatibles have had this option available for a couple of years, Atari now has it too. Functioning a bit like a facsimile machine, OCRs cost about $700 and can convert most type fonts to uploadable material.

Graphics Issues

There are two key issues for getting into graphics: hardware and memory. Hardware forums present up-to-date information on what products are available and provide basic information. "The Picture Support Forum tells how certain types of graphics boards and monitors interface with Run Length Encoded (RLE) graphics and the Graphics Interchange Format (GIF)," says Baker. "Most graphic files tell you up front how much memory you need." Much of the public-domain software requires at least 512K memory.

GIF, a file storage concept, saves an image on one kind of system—an IBM, for instance—and allows it to be viewed by users of other hardware systems, such as Atari or Amiga. The resolution (pixel count) on the creating machine will determine the ultimate quality of the image.

Picture Support Forum Administrator Larry Wood says GIF files are proliferating throughout CompuServe forums. Users are getting everything from images of rock stars and album covers (GO ROCK) to detailed weather maps (GO COLMAPS), schematic diagrams for field service personnel and technical illustrations.

"At present, we're seeing more public-domain freeware programs using EGA," says Gerber. "Once you see that next evolutionary step, seeing how much is out there for EGA, there's an urge to upgrade." More detailed information on GIF can be found in Library 1 of the Picture Support Forum (GO PICS).

For those who want to do professional or hobbyist electronic art and painting (that doesn't use GIF) using Amiga hardware with any of several artistic painting software programs, information is available in the Amiga Forum (GO AMIGAFORUM).

Good Baud News

An upgraded modem, one with a 2400-baud rate, ties into certain graphics potentials. Gerber says a typical comment from CompuServe users is, "I have a 1200-baud modem. How would it be to get 2400 baud?"

But most people want a new, higher-speed modem to increase online efficiency and allow faster downloading. Reduced connect time saves money. CompuServe subscriber Merry Perry of Baltimore upgraded to 2400 baud when she joined CompuServe. "For the same hourly rate, I could not see using the slower speed." Faster baud rates do not carry a surcharge on CompuServe.

In today's marketplace, it's hard to find a bad modem, says CompuServe's Sharon Baker. Nearly all are Hayes-compatible, so it's just a matter of shopping for the best price and deciding which features are necessary.

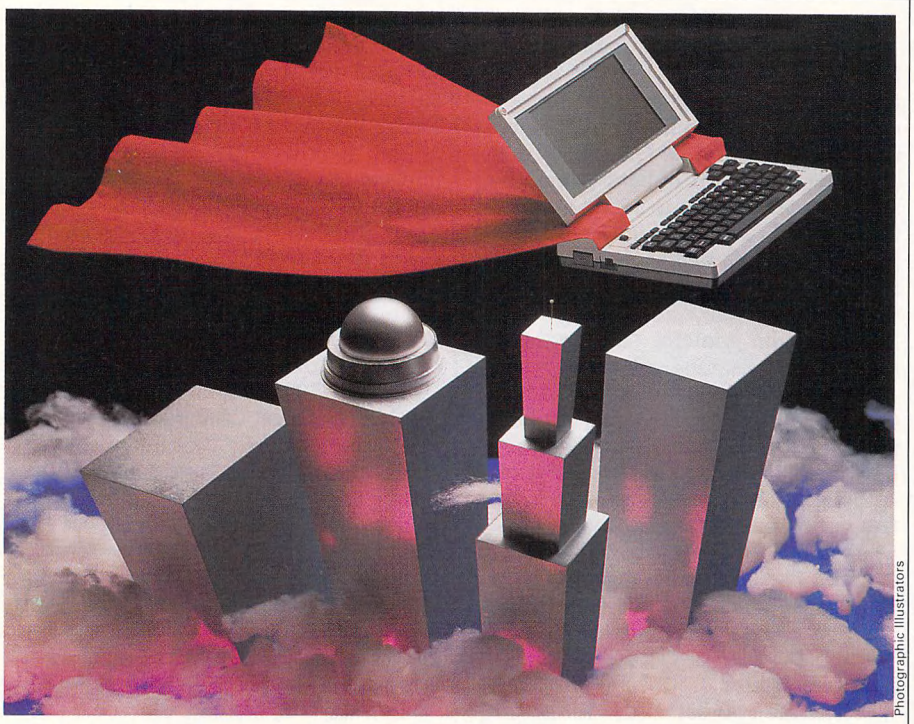
Some modems now feature auto-answer. Line noise level also can be automatically checked by the modem, and some modems have error checking to allow more efficient throughput.

Modem prices are good. With 2400-baud rate transmission available to nearly all CompuServe users, Ron Luks, Atari forum administrator, recommends Supra Corp.'s fully Hayes-compatible external modem. Luks adds that Atari has arranged a special price for a 2400-baud modem that's Hayes-compatible and works on Macintosh, IBM, Amiga and Atari products.

Zippy Downloads

Going hand in hand with that high-speed modem is the communications software that makes downloading a pleasure. According to Baker, "Many people are using public-domain communications packages and want to upgrade to SmartCom, CrossTalk, Professional Connection version 3 (PC3) or Navigator." The trend, says Gerber, is to go from an interactive communications program to one with scripting or batch capabilities, such as Navigator, PC3, AUTOSIG or TAPCIS.

PC3 for IBM and compatible computers (and VIDTEX for other micros)



Photographic Illustrators

provides full-featured capabilities, such as supporting three graphics standards (RLE, GIF and NAPLPS), file transfer (upload and download) and interactive communication. PC3 also allows for a capture buffer to record online activities and a log file to keep track of conversations.

But probably the most exciting feature is scripting. Scripts are commands set up to begin functioning after a specified delay. You do the work offline, set it up, let the program run your system online at a given time and then log off—all without your intervention. Such batch process operations make better use of your time—and money.

To simplify routine tasks, CompuServe offers three automated programs: Navigator (GO NAVIGATOR) for Mac users; AUTOSIG (GO ATO) and TAPCIS (GO TAPCIS) for IBM users. These systems take care of the log-on sequence, call the local CompuServe connection, and supply your CompuServe User ID number and password.

While some commercial products also can do this, these three programs, designed specifically for CompuServe, function well in the forums, databases and electronic-mail environments, and contribute to accelerated online transactions. When messages can be reviewed and composed offline, connect time is minimized. Software forums house additional information on these programs; updated versions are available in the forum libraries.

Also, watch for new communications software with ever-improving offline capabilities. For instance, Dave Gair, author of MBE (Message Board Editor, a communications package for Apple II users), has introduced enhanced offline editing capabilities that will save on connect time.

Laptop Computers Go Mobile

Laptop computers help soothe the anxieties of computer users who have to be away from their terminals. When you combine a laptop computer and modem (many laptop computers now have internal modems), any vacation spot or business meeting room can become a place to check electronic mail or perform other online functions. Laptop computers aren't capable of graphics and are not super-power machines, but they have been increasingly popular in recent years.

Contrary to some advertising campaigns for laptops, you probably haven't seen too many folks using laptops on airplanes or commuter trains. Yet there are plenty of people who do take advantage of this breed of computer because it is light enough and small enough to fit easily into a briefcase or suitcase.

Another part of the original laptop concept—battery packs—also has not caught fire. But the convenience of using the laptop in remote locations and connecting to home or the office via CompuServe has obvious advantages. For CompuServe users, the laptop perpetuates the link with EasyPlex electronic mail. In addition, it may be faster and more convenient than trying to leave phone messages for someone on the road.

For some CompuServe forum administrators, laptops present other options. Consumer Electronics Forum Administrator Dawn Gordon regularly visits trade shows. She is able to tour a show floor, head for a plug in the press room, write a story and quickly upload it to CompuServe, giving forum members the scoop. She also uses her laptop for rapid-fire message exchanges with forum participants. If, for example, the show is in Chicago and someone in Los Angeles wants to know about some rather esoteric specs on a Panasonic VCR, Gordon can check out the display on the show floor, query

Software Solutions Ready to Download

Since there's so much upgrading going on, let's pose a hypothetical situation: Your friend has just upgraded to a laser printer and is willing to give you the used dot matrix. A nice thing to do? Only if your computer is compatible with this printer. And is your favorite software package compatible? Here's where software upgrades, patches and drivers can save the day.

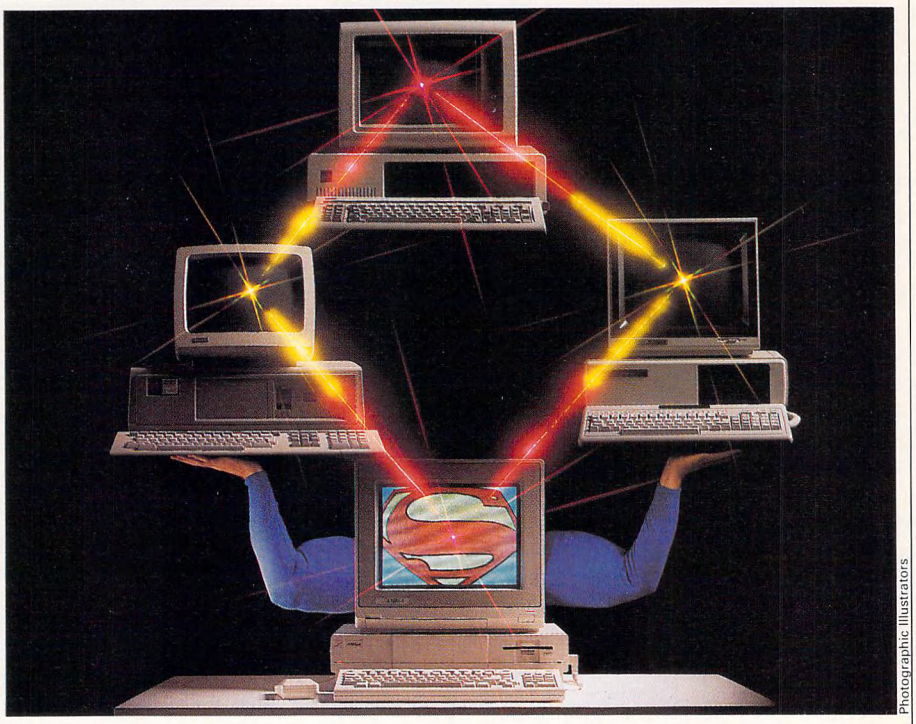
"Finder and Switcher program upgrades are available directly from Apple Inc. by accessing MAUG (GO MAUG)," says Sharon Baker, CompuServe product manager for hardware forums and offline software products. "An upgrade for the CompuServe Navigator is available, as well as the upgrade policy, online via GO NAV."

Upgrades available online can be free or discounted (sometimes only connect time is charged). Most of the time, however, the usual route for software upgrades is to have a previous version of the software. Manufacturers periodically make upgrades or announcements of upgrades by mail to registered software owners. The announcements also can be found within the forums, mentioned as news flashes or threads among the messages on bulletin boards.

the company representative and have a message online in short order.

The increasing popularity of laptops has brought a variety of products to make them easier to use. For example, public-domain software allows transfer of files in 5.25-inch drives to 3.5-inch drives. Laptops now feature 20MB hard drives, internal modems and external disk drives, and run the gamut from industry-leading Toshiba models, which are supported in the PC Vendor Forum (GO PCVEN), to IBM models.

Laptop computers are still a fairly new innovation. There are plenty of onscreen improvements needed, but they are coming. In the meantime, the five- to seven-pound computer can travel almost anywhere. Probably the only potential problem is getting the communications feature to work well through hotel telephone systems. One quick-fix solution is to run travel plans through forum message boards and see if other CompuServe users can suggest hotels with compatible telephone systems. The PC Vendor Forum, as well as the Tandy Model 100 Forum (GO M100) and the other IBM forums (GO IBMNET), offers information on these handy links to the real world.



Photographic Illustrators

Linking via LANs

Local area networks are a way of connecting a group of computers. Just as wide area networks (such as CompuServe) bring together hundreds or thousands of users, LANs bring to smaller groups the power, speed, features and functions of mainframe packages in a short-distance link. Of particular interest in the business environment are personal computer networks (PCNs), which connect only a few microcomputers.

One of the joys of LANs is their ability to share peripherals and files, and CompuServe. Although it may take special protocols, all machines on the network can tap into the connecting wire and share material on it. Networking programs can also facilitate LANs establishment.

Usually most LANs work through a designated administrator who might do such things as determine the level of function for each user, and maintain or possibly restrict access to files, directories or disks. For those considering LANs, it's also important to closely consider system security.

LAN information can be found in the Novell (GO NOVELL), IBM Communications (GO IBMCOM), PC Vendor and Apple Vendor (GO APPVEN) Forums.

Crunching the Dollar

When you decide it's time to upgrade, you might want to consider purchasing used equipment.

There are the many equipment exchange announcements within the forums. As long as you are not a dealer, you can negotiate with other subscribers for used equipment that may perfectly suit your needs. Commercial computer exchange businesses are available to help you upgrade your system by trading it in. Instead of handling the equipment, the exchange business is the middleman bringing the buyer and seller together. The Boston Computer Exchange (GO BCE) is such a business, with more than 1,000 used-equipment listings that are updated daily.

Dissatisfaction with your computer's capabilities is not inevitable, but it is likely. As you become more desirous of top-quality output and more aware of newly offered, sophisticated software and equipment, you will need varying answers at hand to make a decision and achieve your end. Whatever that upgrade may be, there is bound to be information online.

Yvonne Heather Burry is a free-lance writer in Columbus, Ohio. Her CompuServe User ID number is 76703,3057.

Patches are a way to fix a bug—something that's preventing straightforward use of your system. If the software is the culprit, it's often possible to find public-domain software that allows program, computer and printer to work harmoniously. Kathy Gerber, CompuServe product manager for online computing services, says there are plenty of good patches in the public domain as well as distributed by software companies. She suggests looking in the Borland (GO BORLAND), Ashton-Tate (GO ASHFORUM), WordPerfect Support Group (GO WPSG), CE Software (GO APPVEN), Novell (GO NOVELL) and Lotus Forums (GO LOTUS).

These companies distribute patches that are written up in various computer magazines, such as *PC Week* and *MacWeek*.

Drivers and their associated software make printers print. A potential problem here might be something like WordPerfect software being run on a Tandy computer and destined for an Okidata printer, says Gerber. When the manufacturer doesn't provide a driver, some able-minded user generally does. Forum libraries store the drivers and news releases to keep users posted as to what is available. Most drivers are available online for only the cost of connect-time charges.

—YHB

Sources of Support: Online Vendor Forums

by Craig Ellison

CompuServe has always provided a wealth of information through its forums. If you scanned the names of the forums recently by typing FIND FORUMS at a system prompt, you found more than 140 active forums. The list contains many special interest forums as well as forums run by specific vendors such as Microsoft, Lotus and Software Publishing. But what if you want information about a product or support from a vendor who doesn't run a forum? There's one more place to look—vendor support forums.

CompuServe has four forum environments designed to help small-to-medium-sized vendors support their products electronically without having to maintain an individual forum. To save the user time, the vendor support forums are logically organized by types of computers. The vendor forums are for users of Amiga, Apple, Atari and IBM PC computers. Each provides users access to multiple vendors.

While the vendor support forums may at first glance appear to be "mini" versions of the larger single-company forums, there's nothing "mini" about the information exchanged and the data files available. Each vendor in each of the forums has a message board section and separate libraries available for users. Real-time conferencing is also available.

The vendor support forums are structured following the format of the larger single-vendor forums. When you browse the message board in the vendor support forums, you're likely to see lively discussions between users about a vendor's products, technical questions directed to the vendor's support staff, timely responses from the vendor to the user and new product announcements.

The importance and value of the online support from the participating vendors can't be overstated. Some software companies sell user support as an additional item in their product line. And you pay the long-distance charge to stay on the telephone line waiting for "the next available customer service person." The vendor support forums provide direct access to the designers, programmers, support personnel and sometimes even presidents of companies for only the price of connect-time charges.

In addition to the message board for each vendor, there are individual libraries containing fixes and patches for vendors' programs, updates to programs, demonstration programs, news releases and, depending on the vendor, distribution copies of shareware programs. All files are available to forum members in a full range of file-transfer protocols. To check the individual vendor's files, select the "Browse" command from the library menu. As with other forums, there are a few rules that must be followed in the vendor support forums:

- To have full privileges in a forum, you must join. Visitors to forums generally have only "read" privileges in the message board and can't download files.
- There is no obligation when you join a forum. To join, you merely select the Join option from a menu, or type JOIN at a forum prompt. These forums request that you use your real first and last name, and not a "handle" that you might adopt on the CB Simulator.
- Members are asked to keep their messages specific to a vendor's product. Discussions between forum members about the comparative merits of different vendors' products are better handled on one of the more general purpose forums.

And now, to the forums:

Amiga Vendor Support Forum (GO AMIGAVEN)

This forum is supported by the following vendors: Impulse, SoftCircuits, Syndesis, Transactor, MicroIllusions, Avant-Garde, ASDG, C-Ltd., New Horizons Software Inc., Gold Disk and Design Tech Business Systems Inc.

Apple Vendor Support Forum (GO APPVEN)

This forum is one of seven forums of MAUG (Micronetworked Apple User's Group). The forum administrator is Neil Shapiro (76703,401). In addition to Shapiro, there are 10 assistant administrators. This forum has 14 participating vendors. The vendors are ACIUS, Applied Engineering, CE Software, 1st Class Peripherals, Mainstay, Stone Edge Technology, Survivor Software, TOPs, Fifth Generation, Access/Mindwork, Bröderbund, Beagle Bros, Claris and Activision.

Atari Vendor Support Forum (GO ATARIVEN)

This forum is one of four forums devoted to Atari users. Thirteen vendors are currently participating. The forum administrators are Ron Luks (76703,254) and Mike Schoenbach (76703,4363). Vendors include ICD Inc., Intersect, Michtron, Drafix, QMI, Regent Software, Magic Sac (Data Pacific), Atari Explorer, Avant-Garde (PC DITTO), Navarone Industries, SoftLogik (Publishing Partner) Practical Solutions and Analog/ST LOG.

PC Vendor Forum (GO PCVEN)

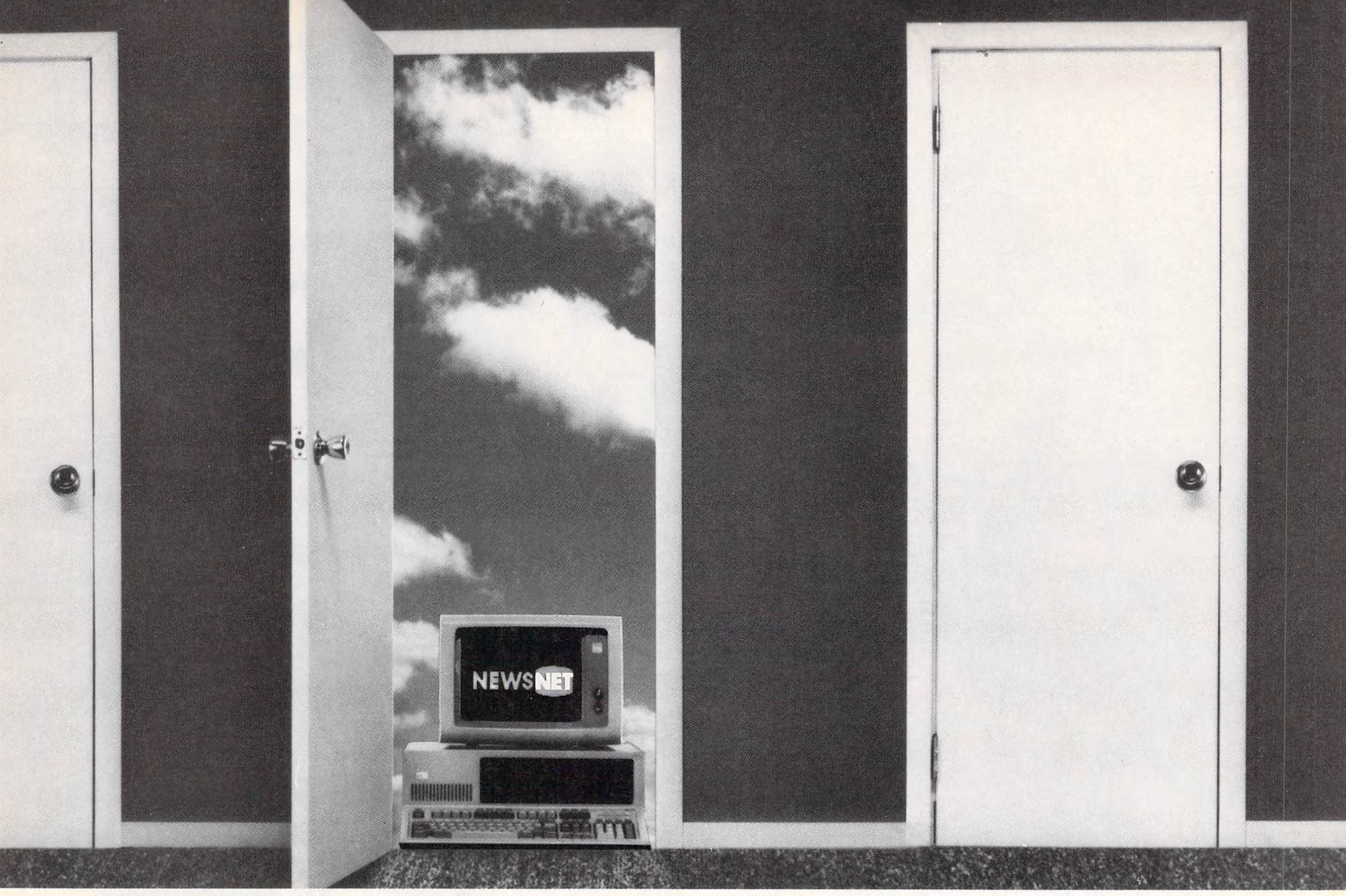
This forum is one of six accessible through IBMNET. Twelve vendors participate in this forum: Buttonware, Mansfield Software, The Software Group, Bröderbund, Magee Enterprises, Custom Technologies, Knowledge Garden, Mustang Software, Toshiba Laptops, Mathsoft, Fox Software and Foresight Group.

New vendors are frequently joining the support forums. So if you're looking for support and the vendor of your product doesn't have a single-vendor forum, drop by the vendor support forum for your type of computer and see what's new.

Craig Ellison, a free-lance writer and microcomputer consultant based in Secaucus, N.J., is manager of personal computer support for the Metropolitan Opera Association in New York. He writes for PC Magazine *and* PC Computing. *His CompuServe User ID number is 76004,73.*

If you're looking for the lowest air fares for your summer travel, try the

GO OAG



Open up to tomorrow's news, today.

Only one database gives you 20/20 foresight.

NewsNet lets you see tomorrow's news today–before it appears in print.

The only online source for newsletters–complete and unabridged.

NewsNet gives you instant access to over 320 industry-specific newsletters. You get in-depth, insider reports written by the most respected experts in fields like telecommunications, aerospace, defense, electronics, computers, investments, finance and more. And not just abstracts or headlines. NewsNet delivers full texts of articles and opinions on regulatory and environmental issues, requests for bids, contract awards, new products, contacts–information that's vital to managing your business.

Exclusive access to wire service news.

Only NewsNet lets you instantly receive the same information newsrooms receive. That's because NewsNet is the only service of it's kind able to scan eleven major domestic and international newswires.

An entire research staff at your fingertips.

Our SDI service, NewsFlash,® is light years ahead of the others. NewsFlash continuously clips items on exactly the subjects you specify–24 hours a day. Each time you log on, your NewsFlash hits are available for retrieval. It's like having your own staff of researchers reading and clipping articles just for you.

Open up to tomorrow's news–subscribe today and get $60 of free online time.

Call toll free:

1 800 345-1301

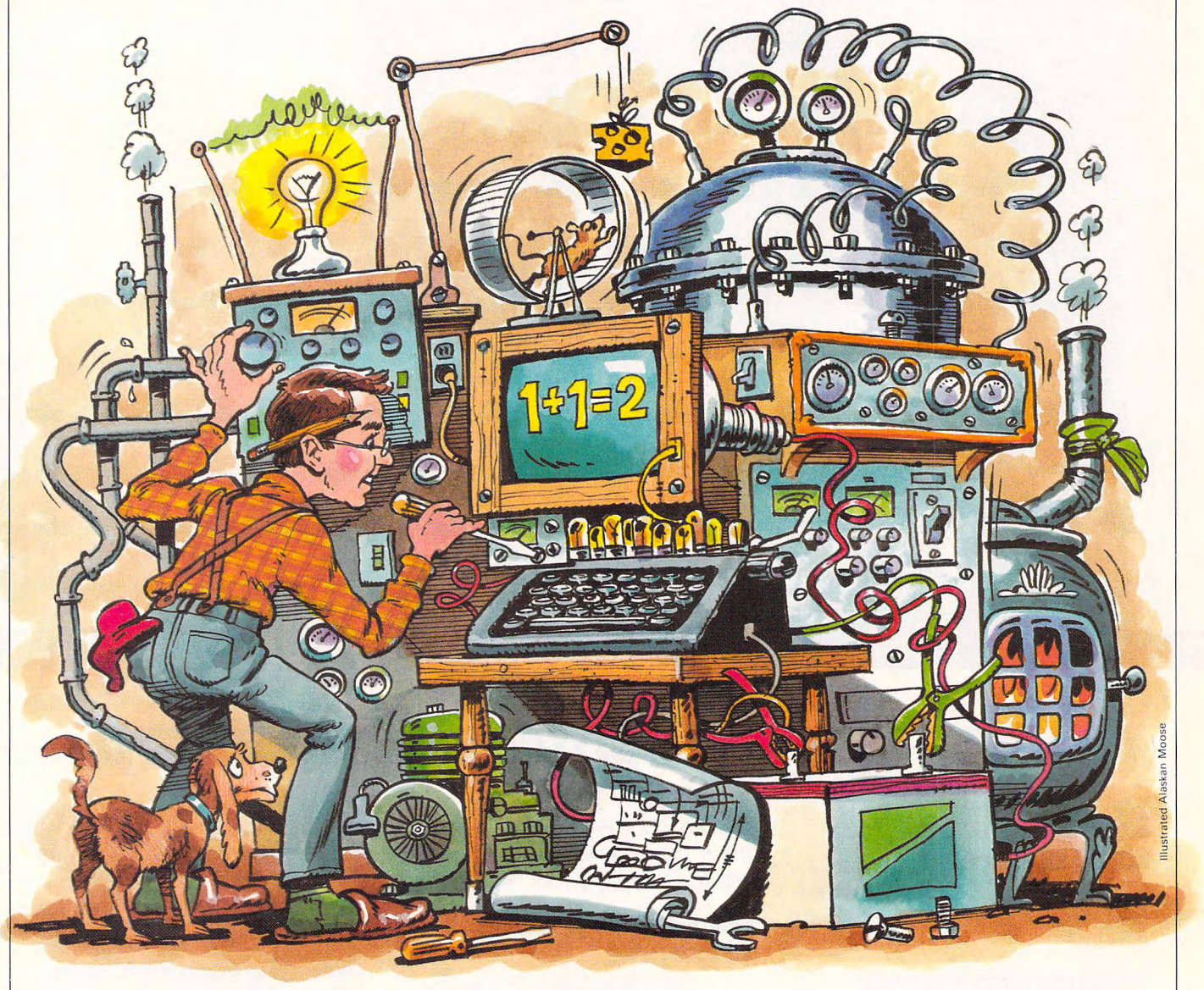
NEWSNET

Before it's in print, it's on NewsNet.

945 Haverford Road, Bryn Mawr, PA 19010
215 527-8030

© Copyright, 1988, NewsNet, Inc. NewsNet® and NewsFlash® are registered service marks of NewsNet, Inc.

GO OLI for more information.



Illustrated Alaskan Moose

How to Build Your Own Computer

Gaining Expertise and Avoiding the High-end Price

by Dawn Gordon

The '386 computer: It's twice as fast as a '286, and, with the right software, it has the ability to run multiple programs simultaneously. But you pay for this power—prices can range from $1,795 to more than $10,000.

Many people feel most comfortable in the middle range, as manufacturers of inexpensive "clones" may have limited lifespans, and the machines in the high end are just too expensive.

There is another option, however: building your own computer. Although this approach may seem intimidating at first, in the end it will not only save you money, but it also allows you to say, "I did it myself."

Modular Construction

The home computer kit is not a new concept—the Heath Company has been in the do-it-yourself business for 40 years. What is new, however, is the recent trend toward modular computer kit construction. Gone are the special chip-handling tools and soldering iron burns. If you can install a video board, you can build a modular computer kit. All you need are two screwdrivers (a flat-blade type and a phillips) and several hours of your time.

Basically, the Heath H-386 is an unassembled, top-of-the-line Zenith Data Systems '386 computer. (The Heath Company is a wholly-owned subsidiary of Zenith Electronics Corp., a respected name in the computer industry.) The price difference between the Zenith Data Systems Z-386 ($6,499 with a 43MB fixed-disk drive) and the Heath H-386 ($3,349) plus the Fixed Disk Upgrade Kit ($1,699) is $1,415. You can save an additional $700 to $1,000 if you opt for a third-party fixed-disk drive.

My curiosity, combined with my need for a new computer at an affordable price, was enough reason for me

to give the kit approach serious thought. A few weeks later, a Heathkit H-386 IBM PC-AT-compatible computer arrived at my door.

Putting It Together

After unpacking the parts to my computer (54 parts; 82 screws, nuts and bolts; DOS; diagnostics; video diskettes and an integrated software package), I was ready to begin.

Committed to the total kit approach, the Heath people know how to get you in the mood. A small flyer contains instructions for putting the instruction booklet together. This simply required two plastic screws, a plastic binder and the pages.

The process of putting together the computer was just as rudimentary. Detailed diagrams and the written work guided me through each step, the first of which was sticking self-adhesive cork feet to the metal chassis bottom. Next I installed the power supply, which required a couple of screws and took only a few minutes.

The next step was the installation of the backplane board. Unlike most other PC-AT-style computers, which contain the primary circuitry on a motherboard, this unique design uses a backplane/board arrangement instead. With the CPU, memory and I/O circuitry on separate cards, the machine is extremely easy to service, and it can be upgraded when new microprocessors and memory chips are introduced.

Most noteworthy in this system is the fact that all six of the computer's 32-bit card slots are auto-sensing. This means that you can put an IBM PC- or AT-compatible card into any of them, provided the card doesn't have a bottom descender that interferes with the slot. There are also two 8-bit and two 16-bit slots.

Connecting the backplane board was straightforward, requiring 10 screws. I was then instructed to insert the lithium backup battery (which powers the system clock and retains setup memory in the machine) into its plastic holder on the backplane board.

I then mated the rear circulation fan to the backplane board. Apparently, Zenith engineers felt two fans were necessary with this design, as the power supply houses what is generally the only fan in most other systems. The result with this machine is a cooler computer at the expense of a slightly noisier working environment.

The next operation involved installing the speaker and the computer's lock system. Speaker installation wasn't a problem, but I needed the aid of my husband—another set of hands—and the help of the Heath Technical Assistance telephone line to get the lock and its corresponding wires into place. These diagrams are slightly confusing, but Heath Technical Support sorted them out, and I was impressed with the courteous, knowledgeable person I spoke with.

At this point I was ready to install the supplied 1.2MB diskette drive and the optional 43MB fixed-disk drive. The process required checking a few switches and jumpers, connecting the drive cables and attaching the drive chassis to the bottom of the computer chassis. It was a quick and painless procedure.

The next step was the easiest, but also, potentially, the most critical. Installing the circuit boards requires some care, as any static charge can damage the sensitive silicon chips. I made sure I was free of static by occasionally touching a metal picture frame.

I plugged in the disk controller board, which can handle up to four drives. Next I installed the I/O board, which contains the serial and parallel adapters, and connects to the lock on the outside of the machine.

I then prepared the CPU board, which houses the powerful '386 chip and support circuitry. Carefully following the instructions and diagrams, I set the DIP switches and jumpers for the amount and type of memory I was using and plugged the card into its slot. The 1MB memory board was next (the unit can be expanded up to 16MB via 4MB cards) and, finally, I set the correct switches and jumpers onto the EGA/VGA-compatible video board and snapped it into place.

After making sure all of the boards were seated properly, I secured them with six screws to the backplane board and connected the disk-drive cables to the drive controller board.

I closed the computer, which required attaching the plastic drive cover to the metal lid, sliding the metal lid into place and securing it with six screws. I connected the keyboard and attached my Amdek 732 color monitor. I was finished building my H-386 computer.

Checking It Out

Five hours had elapsed from the time the shipping carton was opened to the moment the cover was closed on my new computer. I ran the diagnostic tests on the CPU and fixed-disk drive, and prepared the drive for use. After these tests and procedures, which took about two hours, I was ready to start the machine.

I nervously flipped the power switch to on, and the Heath H-386 sprang to life. After restoring my files to the new fixed disk, I installed QuarterDeck's DesqView windowing/multitasking software, and I have been running multiple applications at high speed ever since.

Building my own computer was a wonderful experience. It was far easier than I had anticipated, and I learned a great deal about the inner workings of my system.

Dawn Gordon is the administrator of the Consumer Electronics Forum and a free-lance writer. She has written for PC Magazine, Popular Computing, The New York Post, Rolling Stone, Stereo Review *and other publications. Her CompuServe User ID number is 76703,204.*

The Heath Source

For more information about Heath products, let your fingers do the walking. CompuServe includes two services that are valuable to Heath customers and users.

The Heath Company, available in The Electronic Mall® (GO HTH), offers an online Heathkit catalog of more than 1,000 products and supplies. You can easily search for a particular item by category or model number. For your convenience, prices and shipping charges are displayed next to each item. You also can order a product online with a major credit card, or find the nearest Heath dealer via an online phone directory, which also includes technical assistance phone numbers.

The Heath Users' Group (GO HEATHUSERS) is a forum dedicated to Heath products. Here you will find libraries filled with articles and help files pertaining to Heathkit products, and a forum staff that will answer questions, help you with problems and assist you with choosing the product that best fits your needs. For direct, two-way conversations, a conference facility is also available.

—DG

Cabinet of Curiosities: The Paranormal

by Mike Houdeshell

You're a computer-literate grownup, so your microcomputer, that grim hobgoblin of the age of automation, no longer holds your heart in its icy grip. But still, it's almost Halloween. So maybe it's time to summon your courage and—brandishing your keyboard before you—investigate that eerie rustling coming from the haunted attic (by daylight, the Paranormal Issues section) of CompuServe's Issues Forum (GO ISSUES).

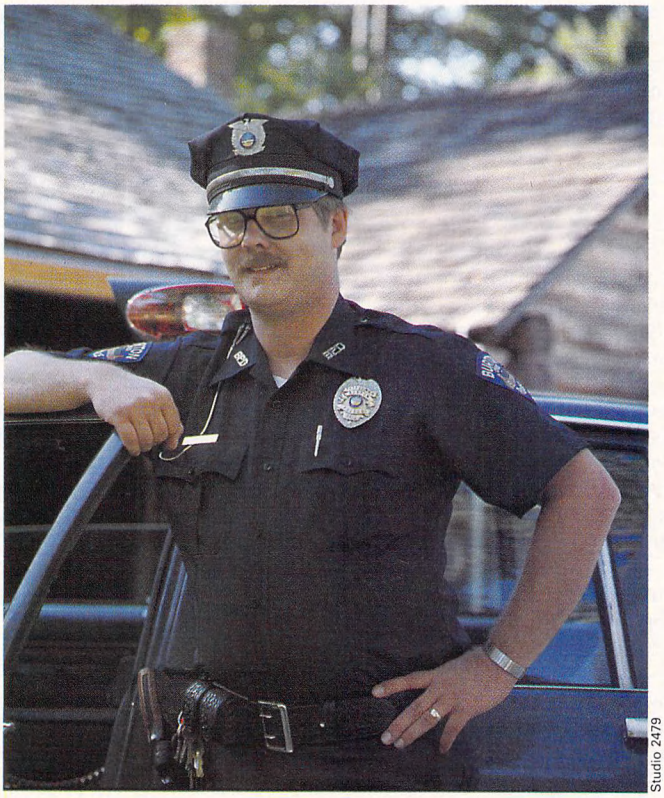
"Paranormal" refers to events or phenomena that lie beyond the pale of the ordinary, or just outside the peripheral vision of everyday life. In a pinch, "spooky" could serve as a synonym.

If you visit the Paranormal Issues section, you will at least find comfort, if not safety, in numbers: the section is one of the busiest on the forum, according to Georgia Griffith, the Issues Forum's primary administrator. The section attracts the "highly sophisticated user, who's extremely interested in the paranormal—sort of believing, but quite sane," says Griffith.

Jim Speiser, the section's co-administrator, echoes Griffith's characterization of section users: "Most are discerning believers, and are among the brightest and most open-minded—yet most rational—people I have dealt with ... skeptics and believers alike."

In the past, discussions have run from ghosts and haunted houses to ESP, channeling, unorthodox healing techniques and Tarot card reading. At present, the alien-abduction phenomenon, popularized by several recent best-selling books, is enjoying the spotlight. But as Dale Wedge, a "believing skeptic," law-enforcement officer, county emergency planner and frequent contributor to section discussions and conferences, is quick to point out, new topics are never discouraged. "This section lets the most current and entertaining subjects come to the top for comment and discussion," he says. Since Paranormal Issues is not a forum itself, there are no set topics; to introduce a new subject, just start a message thread.

Not surprisingly, the occupations of typical section users are no less eclectic than their leisure-time interests. On any given day, you could expect to find an online exchange of opinions by a computer engineer, a corporate research-and-development division manager, a fireman, a university researcher—even a professional "ufologist."



Studio 2479

Law officer a 'believing skeptic' of paranormal events: *Wedge*

Selective disbelief is the rule in Paranormal Issues. There is a wide variation in the pattern of skepticism and conviction, even for a single section user. Take Ted, for instance, a co-administrator for Paranormal Issues who dismisses astrology and crystal healing, but accepts the idea that aliens are kidnapping human subjects on whom they perform painful and frightening medical experiments.

Like many others on the section, Ted is somewhat protective of his identity. For many professionals, interest in the paranormal is best kept secret from associates. For them, CompuServe's forum area is the ideal gathering place for debating and obtaining the latest news from the borders of the real. Moreso than in other forum sections, activity in Paranormal Issues tends to peak during the evening, after-office hours.

Until recently, most users of the section simply stumbled across it. Several came to it by way of the Space Forum, where they went in search of discussions on UFOs and were referred to Paranormal Issues. But hardly anyone starts out hunting for CompuServe's cabinet of curiosities. Perhaps that partly explains the diversity of views and backgrounds that prevents the section from becoming stagnant.

Conferences on topics of current interest are regularly scheduled for Sundays at 8 p.m. Eastern time. One of the most distinguished guests in recent months was Budd Hopkins, familiar to UFO aficionados as a researcher and the author of several books on the subject of alien abductions. A much sought-after speaker, Hopkins was a major coup for the section's conference organizers, and his visit prompted a new round of discussions about the UFO subject in general. It also brought into debate such related topics as "the Men in Black"—secretive, interfering figures, reputed to be national intelligence operatives, who are usually sighted in matte-black helicopters by ufologists. As you might imagine, conferences tend to be lively.

If you're skeptical, you're nevertheless quite welcome. Jim Speiser laments the fact that only 20 percent of the section's users are hard-core skeptics. To his way of thinking, the section can only benefit from an infusion of fresh perspectives. "I would like to see more experts, researchers and big names in the field—on both sides—get online and hash it out. I feel we learn a lot when two points of view clash, because most people don't really have their minds made up about these topics yet. And they get the most information when both sides are presented.

"I would like to see the section become the electronic medium of record for presenting current investigations and the latest reports," he says.

Mike Houdeshell is a free-lance writer based in Columbus, Ohio.

No Longer Kids' Stuff

by Holly G. Miller

Superman may be faster than a speeding bullet and able to leap tall buildings in a single bound, but comics connoisseur Doug Pratt prefers less predictable superheroes. After all, pit the Man of Steel against any adversary and you *know* who's going to win.

"How can you arm wrestle with a guy who can push planets around?" jokes Pratt, administrator of the Comics/Animation Forum (GO COMICS) and fan of Pogo, The Spirit and supermarionation TV shows (in which the heads of string-controlled marionettes contain electronic devices that move the lips and eyes in sync with the voice track recorded by the actors) such as "Thunderbirds." Still, Pratt and his fellow forum members credit the caped crime-fighter with legitimizing comics back in 1938 when the superhero arrived not from Krypton but Cleveland.

Even with his X-ray vision, Superman could never have foreseen his impact on the comics industry. Now, 50 years later, comics are collectibles and have been elevated to art and literary forms. They're no longer kids' stuff but are big business and can cost big bucks. An early Superman issue in good condition, for instance, has a market value of from $600 to $800. Such a hefty price would probably prompt *Daily Planet* editor Perry White to mop his brow and utter, "Great Caesar's ghost!"

"There are a lot of adults who no longer have to shuffle their feet, blush and turn their faces away when they admit they collect comic books," says Pratt. "But as with any collectible, fans have to know the field. Comics were not produced as an investment, and collecting them is not a way to make a great living. For example, I pruned my collection about a year ago, realized a small profit, and immediately put it back into new titles. Like most people who are involved in collecting, I do it because I enjoy it."

The forum caters to all ages and boasts a number of industry giants, including Chris Claremont, writer of Marvel's X-Men comics; Walter and Louise Simonson, writers and artists for several Marvel titles; Mike Gold, an editor at DC Comics; Steve Gerber, writer of the famous Howard the Duck series; and Chris Browne, cowriter of Hagar the Horrible. Inside traders are welcome, and newcomers quickly find themselves members of the in-crowd. It's not unusual for a fan to post a question about X-Men, the hottest property in the business, and draw a response from Claremont.

Studio 2479

Comics connoisseurs tell him what's hot, what's not: *Varga*

"At first the fan thinks, 'Oh, my gosh, I'm talking with Chris Claremont!' But Chris is the kind of guy who jollies people out of that quickly," says Pratt. "Before long you find serious feedback taking place that is valuable to the professionals. They can't write in a vacuum, and feedback is one of the reasons they stick around the forum. Also, they get a chance to talk industry issues among themselves in a private message area."

Communication in the forum runs full circle. Comics creators know what buyers want to buy, buyers know what creators are creating, and shop owners pick up clues as to what's hot and what's not in both camps.

"Online feedback forewarns me about a title that might or might not sell in my store," says Assistant Forum Administrator Nick Varga, owner of a retail outlet in Cleveland, home of Superman originators Jerry Siegel and Joe Shuster. "Of course, all Superman material is going to sell in Cleveland during the 50th anniversary year, but that doesn't make it the best overall investment. People should always consider such factors as artistic and literary merit and characters."

While comics collectors account for 60 percent of the forum membership, fans of animation make up the balance. Particularly popular is Japanese animation, with its serious content geared toward adult viewers. Obstacles such as language and the mistaken American notion that animation is for kids have been overcome with the help of several experts who log on frequently from Japan.

"Without the information I've gotten through the forum, my 'Japanimation' hobby would still be a matter of puttering around trying to get a few pieces of translated shows," says Steve Bennett, overseer of the weekly online animation conferences. "In addition to the translated scripts in our forum libraries, we have a core of diehard fans available to answer questions about the art, where you can get the stuff, how much it costs, and how you can preview it before spending an arm and a leg to buy it."

Part of the fascination with both animation and comics is that they can be enjoyed on different levels at different ages. Doug Pratt recalls reading Pogo as a child because it was funny. Later, in college, he was still reading it, partly for its humor but also for its political commentary. Pogo was a newspaper comic strip in the 1950s and 1960s that was famous for combining biting political satire with funny animals. Pratt plans to use it as a teaching tool when his son, Brian Douglas, is ready for a reading lesson.

"I grew up on Pogo," says Pratt. "Now I'm polishing off all my old Pogo books so this new arrival of ours can learn to read exactly the way I did."

Holly G. Miller, a free-lance writer and college professor from Anderson, Ind., is a contributing editor of The Saturday Evening Post *and* Indianapolis *magazine. Her CompuServe User ID number is 70007,2345.*

Shopping for Catalogs at The Electronic Mall

The Electronic Mall® invites CompuServe subscribers to browse The Mall's Second Annual Online Catalog of Catalogs. Conveniently organized by product category and located on The Mall's top menu, this electronic directory boasts dozens of print catalogs and brochures, all of which can be ordered online.

Begin your holiday shopping by requesting *The Metropolitan Museum of Art Christmas Catalog*. Stock up on office supplies with the all new *Stationery Center's 1989 Office Products Catalog*. Request a free copy of Crutchfield's catalog of home audio and video equipment, telephones and car stereos. Then shop at home for a new car to go with that new car stereo by ordering free color brochures from Ford and Buick. And that's just for starters! Here's a look at a few of the featured catalogs:

Arts/Music/Video

The Metropolitan Museum of Art

The *Metropolitan Museum of Art Christmas Catalog* is 132 pages featuring more than 500 unusual gifts, reproduced from works of art in the Museum's collections, including Christmas cards, advent calendars, terra-cotta cherubs and tree ornaments. There are gifts for all ages, from silk scarves suitable for Grandma to a Mother Goose tea set perfect for tots and tykes. The catalog also features a selection of calendars, including the new Degas Museum Engagement Calendar for 1989. The catalog costs $1, from The Metropolitan Museum of Art. GO MMA

Windham Hill Records

The *Windham Hill Records Catalog* features new releases and the best of Windham Hill's previously released recordings. All can be ordered in LP, CD or cassette. Also offered online is The *Windham Hill Occasional*, a diverse catalog of news on Windham Hill artists. Both are free, from Windham Hill. GO WH

Automobiles

Buick

The Buick catalog of 1988 models is a full-color catalog showcasing the Buick line. Also offered are high-tech brochures on the 2.8 MFI engine, the 3.8 SFI 3800 V-6 engine, antilock braking system and more. All free, from *Buick* magazine. GO BU

Ford Motor Co.

Full-color brochures with complete details on any Ford vehicle. Lines offered include Ford, Lincoln, Mercury, Scorpio and XR4Ti. All are free. Also offered free online is a copy of the booklet, *Car and Truck Buying Made Easier*, from Ford Motor Co. GO FMC

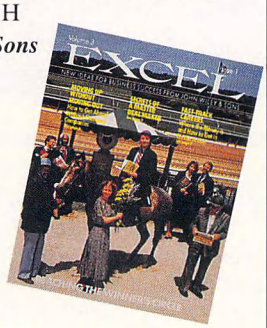
Books and Periodicals

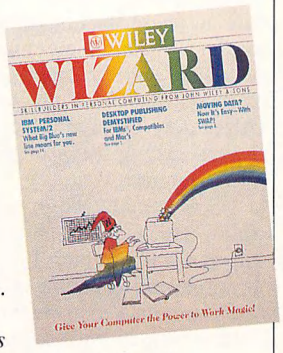
McGraw-Hill Book Co.

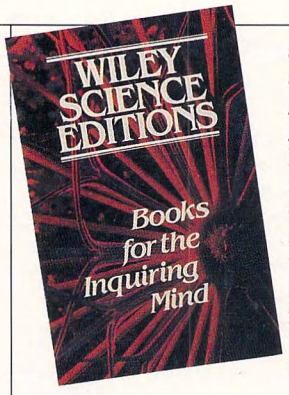
The *McGraw-Hill Book Company Fall/Winter 1988 Catalog* is two catalogs in one—McGraw-Hill's new general-interest books and McGraw-Hill's professional and reference books. It features 160 pages of: sports; current events; computers; biographies of Joe Louis, Smokey Robinson and Bob Dylan; books for the professional in fields such as engineering, construction and computing; cookbooks; business books; and audio cassettes. Anything from the catalog can be ordered online. Best of all, it's free, from McGraw-Hill Book Co. GO MH

John Wiley and Sons

Request any or all of three new catalogs: *Excel*, a 16-page, full-color catalog brimming with the best in new business books; *Wiley Wizard*, a 16-page, full-color catalog packed with new computer titles. Books ordered from either catalog come with a no-risk guarantee. Examine any book risk-free for 15 days. Also offered online is *Wiley's Fall 1988 Computer Book Catalog*, featuring 28 pages of new and backlist titles on personal computing, computer applications, artificial intelligence, programming languages and more. Place orders from any of the three online. All are free, from John Wiley and Sons. GO JW







Computing

CDA Computer Sales

A 40-page catalog of super savings on computers and accessories, featuring products such as the Apple IIe, Apple IIc, IBM and Macintosh. Also highlighted are monitors, printers, software, diskettes and accessories. All products featured in the print catalog can be ordered online. The catalog is free, from CDA Computer Sales. GO CDA

Computer Express

A 220-page, full-color catalog packed with thousands of products for the Apple, Macintosh and IBM. Featured software categories include language, arts, foreign language, personal development, entertainment and productivity tools. The cost of $4 is refunded with your first catalog purchase. Everything from the catalog can be ordered online from Computer Express. GO CE

R+R Direct

A 68-page, full-color catalog of computer supplies and accessories, all at discount prices. CompuServe subscribers who order electronically enjoy an additional 5 percent rebate. The catalog also has complete details of R+R Direct's Instant Free Gift and Frequent Buyer Value Plus programs. The catalog is free, from R+R Direct. GO RD

Gifts and Collectibles

Crabtree & Evelyn

A lovely 88-page, full-color catalog featuring the entire selection of Crabtree & Evelyn toiletries and comestible productions. Crabtree & Evelyn's delectable gifts include a breakfast-in-bed tray for her, a shaving

accessories kit for him, and Beatrix Potter figure soaps for the younger set. To tempt the taste buds, there are biscuits, marmalades and preserves, mustards and more. A catalog for catalog connoisseurs, free from Crabtree & Evelyn. GO CR

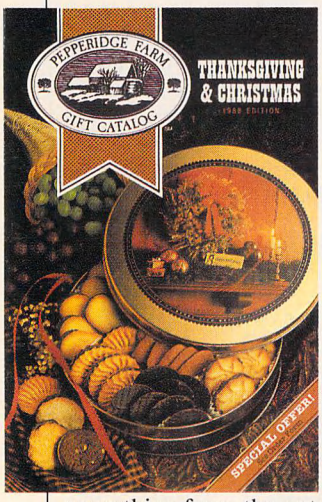
Gourmet Foods and Flowers

Morrell & Co.

A full-color, oversize catalog featuring a selection of the best in domestic and imported wines, as well as informative articles on different vintages and wine regions. A must for the wine enthusiast or even the occasional imbiber. The catalog is free, from Morrell & Co. GO MC

Pepperidge Farm

A full-color catalog of mouthwatering goodies and gifts. Featured products include Pepperidge Farm's tabletop Christmas tree, a "Believe" cookie tin packed with all of Santa's favorite cookies, fruitcake with brandy and Grand Marnier, and Christmas plum pudding. Order anything and everything from the catalog online. The catalog is free, from Pepperidge Farm. GO PF



Simon David

A 24-page, full-color catalog of gourmet foods, gift items and Texas specialities. Featured products include Simon David smoked hams, bacons and turkeys; sirloin steaks and filets; Texas-style gift baskets; cookbooks and Simon David's infamous rattlesnake meat. The catalog is free, from Simon David. GO SIM

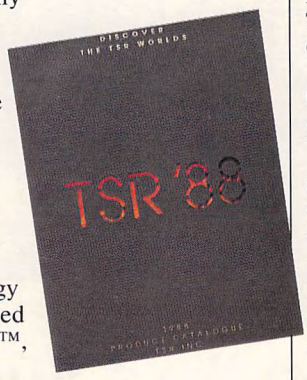
Hobbies/Toys/Pets

Don's Dollhouse

The *Miniatures Catalog, 10th Edition* is the miniaturists' "bible." The catalog, published annually, includes dollhouses and accessories, including building materials of all kinds. The cost is $15.95, from Don's Dollhouse. GO DD

TRS Game Shoppe

A full-color, 68-page catalog, the *TSR '88 Catalog of Games* features a line-up of family entertainment games. New games highlighted include *The Hunt for Red October*, *Buck Rogers' Battle for the 25th Century* and *Dragonlance*. Strategy games suggested include *Chase*™, *Kage*™ and *Steppe*™. Others are *Top Secret/S.I. Espionage* role-playing games and a full line of *Dungeons & Dragons*. All products can be ordered electronically. The catalog is free, from TSR Game Shoppe. GO TSR



The Men's Shop

Brooks Brothers

A gathering of men's wear, boy's wear, women's wear and unusual gifts. The catalog is free, from Brooks Brothers. GO BR

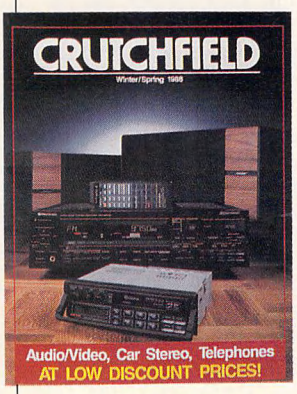
Elite Eyewear

Two full-color catalogs of eyewear: The *Elite Eyewear Catalog* features non-prescription and prescription eyewear, including sunglasses, accessories and a rebate coupon. You also can order the *Serengeti Drivers Sunglass Catalog*. Both are free and orders from the catalogs can be placed electronically, from Elite Eyewear. GO EE

Merchandise and Electronics

Crutchfield

A 116-page, full-color catalog of car stereos, home audio and video equipment, telephones, CBs, security systems and electronic accessories. Brands include JVC, Akai, Pioneer, Bose, Panasonic, Sony, Magnavox, Clarion, Infinity, Kenwood, Jenson, Proton and Sherwood, to name a few.



The catalog includes helpful articles on purchasing electronics and information on Crutchfield's toll-free product information service and technical support. The catalog is free, from Crutchfield. GO CFD

Office Supplies and Services

The Stationery Center

The *1989 Office Products Catalog* is an encyclopedia of office and computer products, offering 900 pages packed with more than 25,000 items, all of which can be ordered online. The catalog costs $12, which is rebated with any order of $45 or more, from The Stationery Center. GO SC

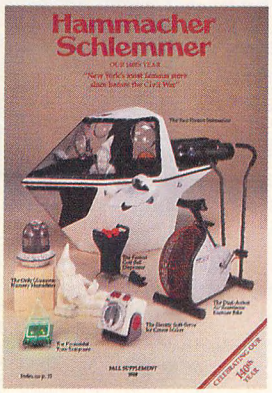
Sports and Leisure

Char-Broil Outlet

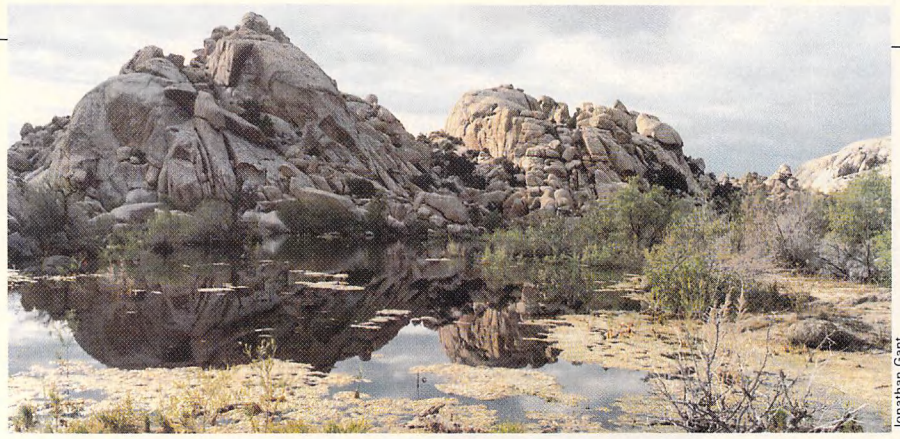
The *Grill Lover's Grill Book* is a 32-page, full-color catalog of accessories for the grill enthusiast, featuring outdoor cooking, handy gadgets, smoking woods, covers, cookbooks, tools and more. The catalog is free, from Char-Broil Outlet. GO CO

Hammacher Schlemmer

This catalog contains an eclectic selection of items. Dedicated to bringing you "the best" and "the only," Hammacher Schlemmer has, for 139 years, offered its customers the latest in innovative products. The full-color catalog includes detailed product descriptions. Everything in the print catalog can be ordered online. The catalog is free, from Hammacher Schlemmer. GO HS



There are dozens of other catalogs offered in The Mall, including catalogs for hobbyists from Heath Co.; a video catalog of new and classic releases from Waldenbooks; and tools, electronics and accessories from Panson Electronics. To explore The Mall's complete Catalog of Catalogs, GO MALL.



Jonathan Gant

Smog-free desert air makes scenery breathtaking: *Palm Springs*

Enjoying the Endless Sun

Palm Springs' Desert Splendor Entices Vacationers

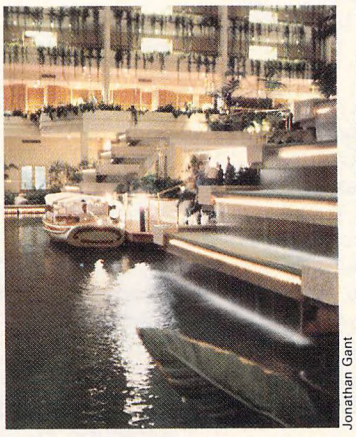
by Jonathan Ganz

Palm Springs—it is the city of endless sun, smog-free desert air, immaculate golf courses, tennis courts and swimming pools. On top of it all, famous entertainers are everywhere, even in the mayor's office where Sonny Bono presides.

Where to Stay

Although Palm Springs is one of the most well-known resort communities in the world, motels are nonexistent due to a city ordinance forbidding them. There are, however, many hotels in the greater Palm Springs area with thousands of rooms. But don't be fooled—during "the season" (which usually begins after Labor Day and ends Memorial Day), rooms are hard to come by and reservations, made far in advance, are required. A small room at one of the major hotels starts at about $75 for double occupancy. A suite for a weekend could cost a few thousand dollars. If you're unsuccessful in finding a place in Palm Springs, accommodations are available in the neighboring communities, such as in Rancho Mirage, where President and Mrs. Reagan often stay, or in Palm Desert.

No matter where you stay, be sure to visit Marriott's Desert Springs Hotel and Spa on Country Club Drive in Palm Desert. It's truly a sight to behold. Among the more distinguishing features is the 20 million gallon indoor/outdoor lake that surrounds the hotel like a castle's moat. Stocked with a large selection of fresh-water fish, such as trout and bass, the lake is also part of the inside of the hotel. Fishing, however, is not allowed.



Jonathan Gant

Truly a sight: *Palm Desert Marriott*

Free boat rides are available for a 10-minute tour of the hotel grounds. Evening rides require reservations. The boats are electrically powered and leave the center of the hotel through glass doors that open and close by remote control. Besides the beautiful, if decidedly decadent, surroundings, you can sample fine food at the Japanese restaurant that is one of the stops on the evening rides.

Marriott Desert Springs Hotel and Spa offers dancing to live music on the weekends. And, on selected nights, hotel guests are greeted by hosts dressed in white hats, white tuxedo jackets with tails, shorts and tennis shoes.

Where to Go

You can ride the Aerial Tramway, the largest double-reverse passenger-carrying tramway in the world, to visit San Jacinto (pronounced Ya-Sin-Toe) State Park, which has 54 miles of hiking trails, five campgrounds and a Nordic (cross-country) ski center from Nov. 15 to April 15 (snow permitting). You can even dine at the top (8,000 feet in elevation). Don't be surprised to see snow on the mountain even when temperatures are high on the valley floor.

The Joshua Tree National Monument, known for its desolate desert splendor, is less than an hour due east of Palm Springs. (The Joshua Tree is a cactus, so named because of its vague resemblance to a man raising his arms to the sky.) Take Interstate 10 to the Cottonwood Springs entrance on the southern end of the monument and travel north. Be sure to stop at the ranger station, where a wealth of helpful information is available so you can fully enjoy your visit.

On the way back from the Joshua Tree, take 29 Palms Highway south to Desert Hot Springs, a small community adjacent to Palm Springs. There isn't much to see, but it has what the town name describes: real hot springs mineral baths. If you drive along the main drag (Dillon Road), you'll see several small resorts that offer hot baths for a small charge. They are for the most part clean, inviting places. The baths in every spa I visited were housed in pool-like facilities with changing rooms. Some have regular swimming pools to cool off in. Some have small concession stands where you can buy a soda or fruit juice.

What to Do

Palm Springs and the surrounding Coachella Valley communities offer rare diversities: within an hour of the downtown Palm Springs center district, there is everything during the season from cross-country skiing, high desert camping and rock climbing to sparkling hot springs baths, tennis, dancing and fun shopping and dining experiences. Browse *The Desert Sun* newspaper to find local events and information.

During the season, most shops stay open late. There is plenty of window-shopping available right on Palm Canyon Street in the center of town.

The larger hotels offer a variety of dancing for young and old. There are also several discos and bars to choose from. Zelda's is a well-known downtown hangout. It has a bit of a reputation for being rowdy, but can be a lot of fun. Another popular but more remote disco is Pompeii. Like Mount Vesuvius that destroyed the town of Pompeii in 79 A.D., the disco is known for its explosively fun atmosphere.

Every conceivable kind of food is available in the Coachella Valley, from figs (the valley accounts for 90 percent of the nation's supply) to excellent deli

food (Fromin's in Rancho Mirage) to numerous fine restaurants offering a variety of dishes. If you like Mexican food, this is the place to be.

Online Help

CompuServe offers several ways to find out about Palm Springs and neighboring communities. Use the Official Airline Guide (GO OAG), Travelshopper (GO PARS) or Eaasy Sabre (GO EAASYSABRE) to get flight times and dates. Use the travel section (GO TRAVEL) for more general information, such as hotel information with ABC Worldwide Hotel Guide (GO ABC). You could even try the Travel Forum (GO TRAVSIG) for more personal recommendations. For weather information, type GO WEATHER at any prompt.

Jonathan Ganz is a free-lance writer based in Portola Valley, Calif. His CompuServe User ID number is 74425,1054.

Saving Time or Money

How to Get the Best Out of OAG

by Kathy Baird

Through CompuServe's Official Airline Guide (GO OAG), vacationers and business travelers can select and book the travel arrangements that best meet their needs, without leaving the home or office. OAG gives travelers a full choice of airline schedules and fares, seat availability, and hotel and motel information. In addition, when travelers book their tickets online with Thomas Cook Travel, hotel and car rental reservations can be made.

Because of differing priorities, vacation and business travelers use OAG in different ways. Business travelers are more concerned with saving time, while vacationers are more interested in saving money. By booking their reservations early, vacationers can take advantage of many special airfares and travel packages. Such cut-rate packages rarely meet the needs of business travelers, who are more interested in getting to their destination efficiently.

Imagine that computer consultant Susan Watkins is planning a business trip from Chicago to Denver, while student Michael Thomas is planning to leave Chicago for a skiing vacation in the Denver area. Susan's meeting is scheduled for the afternoon of Wednesday, Nov. 30, while Michael hopes to schedule a few days of skiing anytime between Thanksgiving and Christmas. Although both travelers use OAG to schedule their trips, they will end up with quite different arrangements.

Michael books his flight weeks in advance to qualify for a special fare. Conversely, Susan books her flight with only four days' notice.

For his ground package, Michael selects a $118 Thomas Cook Travel ski package that includes five nights at the Budget Alpina Haus in Aspen. While reviewing OAG, he is pleased to note that heated pools and nightlife will be available and that he will be within walking distance of ski lifts.

Michael finds that he can save money on airfare by leaving on a Thursday morning and returning on a Monday afternoon. He selects a $213 round-trip package on United, scheduling his departure for Thursday, Dec. 1, at 8 a.m. on Flight 221 from O'Hare Airport. That flight is scheduled to arrive in Denver at 9:29 a.m.

Michael books a return trip on United Flight 234, which leaves Denver at 3:10 p.m. and arrives at O'Hare at 6:26 p.m.

Instead of renting a car, Michael plans to meet a friend and fellow skiier in Denver. That friend will pick him up at the airport and together they will drive to Aspen.

Unlike Michael, Susan's key travel concern is convenience, not price. She needs to arrive on time for her 2 p.m. meeting in Denver. Then, she needs comfortable hotel accommodations for a good night's sleep before leaving for a board meeting in Buffalo the next evening. Through OAG, Susan finds that an American Airlines flight departs from Chicago at 8:40 a.m. on Wednesday, Nov. 30, and arrives in Denver at 10:18 a.m. The next morning, a return flight is scheduled for a 9:10 a.m. departure from Denver and a 12:34 p.m. arrival in Chicago. The round-trip fare is $295.

Susan is able to determine specific details about her flights. For instance, she learns that breakfast will be served on her return flight, and that that particular flight has an 80 percent to 89 percent on-time performance record.

Next, Susan finds a connecting American Airlines flight—number 180 to Buffalo—which is scheduled to depart from Chicago at 1:25 p.m. on Thursday, Dec. 1. That flight should put her in Buffalo at 3:55 p.m., giving her plenty of time to prepare for her 8 p.m. board meeting.

Susan charges the airline reservations to her credit card and receives immediate online confirmation. She plans to pick up her airline tickets at the airport rather than at a branch airline office, or having them delivered through Federal Express or the US Mail.

Next, she uses Thomas Cook Travel to make hotel and rental car reservations. She selects a comfortable, convenient hotel suite near the airport.

When Dec. 1 arrives, Michael's flight to Denver departs on schedule. When he arrives at the hotel, his room is waiting. After a wonderful ski weekend, he returns to Chicago on Monday night, refreshed and ready for class on Tuesday morning.

The first leg of Susan's flight also goes off without a hitch. When she arrives in Denver, her rental car is waiting at the airport and she has ample time to drive to her meeting. That night, after the meeting and dinner with her client, she has a comfortable stay in her reserved hotel suite. The next morning, she arrives at the airport in plenty of time for her flight.

Then a problem arises. A severe thunderstorm strikes the Denver airport, delaying all flights. Despite her thorough planning, Susan's return flight to Chicago takes off two hours late, and she knows she will miss her connecting flight to Buffalo.

Luckily, Susan always carries her laptop computer to business meetings. Once she is in the air, she uses her computer and the airline's cellular phone to dial into OAG on CompuServe. She cancels her 1:25 p.m. connecting flight. Instead, she books a reservation on American Airlines Flight 528, which is scheduled for a 3:57 p.m. departure and a 6:32 p.m. arrival in Buffalo.

When Susan's plane lands in Chicago, she confirms her new flight arrangement at the American Airlines desk. Without missing a beat, she is on her way to Buffalo. Thanks to OAG, she still arrives on time for her 8 p.m. board meeting.

Like Susan and Michael, other OAG users can create personalized travel plans that emphasize cost, timeliness or other special factors. The Official Airline Guide puts a whole world of travel possibilities at their fingertips.

Kathy Baird is a free-lance writer based in Columbus, Ohio. Her CompuServe User ID number is 70007,2277.

CONGRESSgrams Persuade FCC to Drop Access Charge Plan

Editor's note: Alexander B. Trevor wrote this article to officially thank the CompuServe subscribers who electronically united in opposition to a Federal Communications Commission access charge proposal. The proposal, which would have doubled the cost of information services for many users, was dropped by the FCC in April 1988.

Thanks to the subscribers who sent CONGRESSgrams via EasyPlex to their elected representatives and the Federal Communications Commission.

Claiming that data users were "subsidized" because long-distance voice companies pay an access charge to the local phone companies, the FCC failed to acknowledge that users pay for a local call to their local telephone companies when accessing public-packet data networks. No local call charge is incurred for long-distance access; thus another method to pay for local telephone facilities is needed. The FCC remarked that the response—virtually "all opposed"—to the access charge far exceeded the response on any other issue.

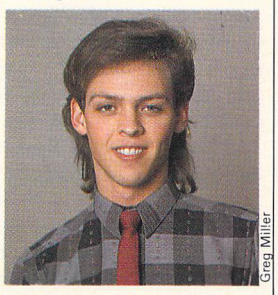
Supporters thanked: *Trevor*

The commissioners apparently were swayed by your persuasive EasyPlexes concerning the effect of the proposed charges on you and on the emerging consumer information services industry. Your efforts mark a milestone in the evolution of electronic mail, but more importantly, they have proven that citizens can use computer networks to effectively participate in the democratic process at the federal level in a very direct way. CompuServe is glad to have been a part of this successful effort to convey the desires of the American public to its elected and appointed officials in Washington, D.C.

A. B. Trevor
Executive Vice President,
Support Services and
Chief Technical Officer
CompuServe Incorporated

Tip of the Month

Cary Rogers, a sophomore in social sciences at Ohio State University, is a Customer Service representative from 9 a.m. to 6 p.m. Monday through Friday. "I enjoy the fast pace of the daytime work environment and the high level of professionalism with which CompuServe's business is conducted," Cary says.



Greg Miller

Patience is key: *Rogers*

Cary also enjoys working with the professional forums and using the business- and technology-oriented software. "I enjoy helping people learn how to explore the exciting potential of CompuServe's vast resources, especially when I've taught someone something new, innovative or enjoyable," Cary says. He adds that patience and knowing when and where to ask for help are keys to using CompuServe.

Gift of Time

Online Today offers CompuServe members the chance to win 10 hours of standard service connect time (a $60 value) by writing a 200-word essay on how they use the information service.

The essay should be typed double-spaced and sent to *Online Today*, CompuServe Incorporated, 5000 Arlington Centre Blvd., P.O. Box 20212, Columbus, OH 43220, or via an EasyPlex message to 70003,3246.

Computer Upgrade

A few months ago I decided to upgrade my home-computing system. While I was pleased with the performance of my new IBM PC, there was one serious problem. For several years I had been compiling an important bibliography of articles and books using a word processor on a Commodore 64. While the Commodore 64 and the IBM PC both use 5.25-inch diskettes, the formats are incompatible.

I groaned at the thought of rekeying and proofreading more than 30 pages of text. Then I remembered the Personal File Area on CompuServe. Using this area, I was able to convert my old Commodore 64 files to IBM PC files in less than an hour. The process was simple and saved me hours of work.

Richard Griscom
Evanston, Ill.

Ask Customer Service

Q: I'm considering upgrading my microcomputer equipment. Where can I find product information to help me make a decision?

A: The Microsearch Reference Library is a searchable database devoted exclusively to microcomputer information. Microsearch contains more than 20,000 abstracts (informative summaries) of both product reviews and product literature from thousands of manufacturers and publishers. GO MICROS.

Q: I've decided to upgrade my microcomputer equipment. Is there a service online that will help me sell my current equipment?

A: Yes, the Boston Computer Exchange may be able to help you find a buyer for your equipment. The BCE maintains a list of buyers and sellers and puts them in touch with each other. To assist the buyer, the BCE makes available a listings database for bargains and the latest closing prices on selected models of used computer equipment. Type GO BCE.

Q: Can I order software online?

A: Many types of software programs are available online. In addition to the many software distributors in The Electronic Mall®, CompuServe also sells software. Type GO ORDER to access CompuServe's Product Ordering area and browse among such software packages as Navigator, Professional Connection 3® and VIDTEX®, available for IBM, Apple, Atari, Commodore and Radio Shack machines. The SOFTEX℠ Software Catalog enables you to download commercial software products directly to your computer. Type GO SOFTEX.

Acer 1100:

An 80386-Based Desktop Microcomputer

Acer Technologies
401 Charcot Ave.
San Jose, CA 95131
408/922-0333

Computer: Acer 1100.
Operating System: MS-DOS 3.x or OS/2.
Features: 16 MHz 80836 processor with 1MB RAM, one 1.2MB diskette drive, eight expansion slots, two serial ports, one parallel port, 101-key enhanced keyboard, MS-DOS with GW Basic and a one-year warranty.
Options: 4MB RAM; additional diskette drive; internal hard disk; 80387 math coprocessor; monochrome, CGA or EGA monitor and video adapter.
Model Tested: 1,024K Acer 1100 Model 40 with 1.2MB diskette drive, 40MB hard disk, math coprocessor and EGA monitor.
Prices: $4,195 for basic system; $5,765 for system tested.

Reviewed by Franklyn Jones

Veterans of the PC industry may recall that a few years ago, a PC-compatible vendor called Multitech introduced Taiwanese-made systems for the business user. Well, Multitech is back, this time under the name Acer Technologies, which is Multitech's US subsidiary. The company's systems still are built in Taiwan, but the technology and performance have been drawing praise from users and members of the press.

At about 21 inches wide and 17 inches deep, the Acer 1100 isn't much bigger than most 80286 machines, but it weighs more than 90 pounds with its monitor and hard disk. On the right side of the front is the 1.2MB half-height diskette drive, with space for adding two more half-height drives.

The rear of the system unit presents two standard serial ports and one parallel port, plus the keyboard cable jack and a selectable voltage switch (115V or 230V). The system power switch also is on the back, which is not a particularly convenient location.

Inside, the system unit is neatly designed and has lots of room for growth. Not only is there room for three half-height diskette drives, but also for two internal half-height hard disks. In addition, eight expansion slots all use the standard IBM PC-AT bus structure. Five are 16-bit slots, two are 8-bit slots and one is a 32-bit proprietary memory slot for which Acer Technologies offers an optional 32-bit memory expansion board with up to 16MB of total system memory.

Also located within the system unit are a 200-watt power supply (the fan is somewhat noisy) and a real-time clock/calendar with CMOS RAM and battery backup. The system board is built in Taiwan, but it is populated with chips from most major US manufacturers.

Of the eight expansion slots, one is occupied by the serial/parallel ports, one by a display adapter and one by the hard-disk controller that can connect up to four storage devices.

The standard 1.2MB floppy drive is built by Panasonic and performs well. The 40MB hard disk that came with the machine was built by MiniScribe and was a major problem. After two weeks of progressive degradation in performance, it reached a stage where disk access time was more than 60 seconds, convincing me to contact Acer Technologies about replacing the drive. They weren't surprised to hear of my problem and replaced it with a 70MB MiniScribe boasting a 28ms access time. Unfortunately, that drive also displayed erratic behavior, though not as severe as the 40MB drive.

With the computer's clock speed fixed at 16 MHz, the System Information program from The Norton Utilities Advanced Edition consistently reported a Computing Index of 16.3, a Disk Index of 3.5 and an overall Performance Index of 12.0 times a standard IBM PC-XT. By comparison, a 16 MHz Compaq Deskpro 386 reported a CI of 17.6, a DI of 3.8 and a PI of 13.0 when *Online Today's* reviews editor evaluated that machine. But a 12 MHz 80286 computer with a 32ms hard disk may only achieve a CI of 11.7 to 13.7, a DI of about 3.8 and a PI of 9.0 to 10.4, depending on whether it is running with zero or one memory wait state.

The monitor accompanying my system was a 14-inch color monitor with a non-glare screen and separate controls for brightness and contrast. This dual-frequency monitor supported both EGA and CGA display modes. Color saturation and brightness were quite acceptable, and the monitor easily handled 640-by-350 graphics resolution and 720-by-350 text resolution.

The Acer keyboard uses the standard layout for enhanced 101-key keyboards. Twelve function keys are located across the top row, and there are separate key clusters for the cursor arrows and the numeric keypad. Four LEDs at the upper-right corner indicate power, Caps Lock, Num Lock and Scroll Lock status. The only problem was the Z key, which wouldn't work unless I pressed its bottom edge.

Many people still are skeptical about the PC compatibility of Taiwanese-built computers. If there is a problem in this area, I couldn't find it. During a six-week period, I installed and ran various word processors, database managers, spreadsheets, graphics programs and desktop publishers. I even ran a custom COBOL application written specifically for the IBM PC.

The documentation that comes with the computer includes an MS-DOS manual, a GW Basic manual and a system user's guide. The latter is fairly well illustrated, but seems to be skeletal in its information and is geared more toward the advanced user who has some working knowledge of system internals. The system also comes with a full one-year warranty, which includes four months of on-site service from TRW.

On the whole, I found the Acer 1100 a solidly built machine that delivered acceptable performance. The problems with the MiniScribe hard disks were surprising given that company's reputation for reliable technology. Since neither MiniScribe hard disk I tried instilled confidence, prospective buyers should further investigate Acer's satisfaction with those drives. It might be wise to select a drive from some other supplier and install it separately after the computer purchase.

Aside from that, the Acer 1100 merits consideration if you are shopping for an 80836 machine.

Franklyn Jones was formerly the managing editor of Interface Age *magazine and editor-in-chief of* IBM PC Update *magazine. He has written articles for various computer publications, is a regular contributor to* Online Today *and serves as a marketing and communications consultant.*

Go Online for More Hardware Reviews

The following hardware review is available this month in *Online Today Daily Edition* (GO OLT-220).

Asher JT FAX Facsimile Card
Manufacturer: *Asher Technologies Inc.*
Computers: *IBM compatibles.*

MultiScribe GS

Word Processing on the Apple IIgs

Styleware
5250 Gulfton, #2E
Houston, TX 77081
713/668-1360 or 800/233-4088

Computer: Apple IIgs (other MultiScribe versions available for Apple IIc and IIe).
Operating System: ProDOS 16.
Media: Requires one 3.5-inch disk drive.
Copy Protection: None.
Required Peripherals: None.
Other Requirements: 512K RAM.
Optional Items: Printer recommended.
System Used for Test: Apple IIgs with one 5.25-inch drive, one 3.5-inch drive and Apple Imagewriter printer on Appletalk network.
List Price: $99.95.

Reviewed by Brian D. Monahan

MultiScribe GS version 3.0 is a full-featured word processor that includes the attributes found in successful predecessors and offers some exciting features that take advantage of unique Apple IIgs capabilities.

MultiScribe GS offers features we've come to expect—cut, paste and copy—plus a search-and-replace function and extensive options for producing headers and footers. Rule-based formatting permits centering lines, justifying text, and setting margins, tabs and page breaks.

This program also has features not usually found on programs near its modest price. For example, MultiScribe GS enables the creation of documents in a wide variety of fonts, even allowing those fonts to be stylized. Each font can appear in a range of styles, including boldface, italic, outline and shadow. Superscripting and subscripting are handled with ease.

MultiScribe GS offers a built-in, object-oriented graphics capability that makes it easy to draw lines and create filled and hollow shapes. And it is compatible with most major Apple IIgs graphics programs, including Styleware's Top Drawer, Electronic Arts' Deluxe Paint II and Activision's Paintworks Plus. Once graphics are imported from such programs, they can be reshaped and cropped quickly and easily.

A thesaurus and a spelling checker are expected in a high-quality word processor, and MultiScribe GS offers both. The *Merriam-Webster/Proximity Dictionary* offers sophisticated spelling detection and correction. It also offers orthographic and phonetic word suggestions for questionable words and spellings. The *Merriam-Webster Thesaurus* will generate 470,000 true synonyms. Both work well—and quickly—presenting reasonable suggestions for spellings and synonyms.

The program is run with pull-down windows and dialog boxes that emulate a Macintosh environment. The Macintosh-like interface makes the program easy to learn to use.

The professional-looking, spiral-bound, 194-page manual includes specific instructions for setting up the system and for getting started with the program. It makes widespread use of illustrations showing screen displays. Extensive online help supports the manual so well users will rarely refer to the manual once they've gotten started.

One feature regular Apple users will find attractive is this program's ability to import Appleworks files. It does so without conversion and retains all formatting, including character styles and tabs.

Printing, of course, is a most basic feature of any word processor, and MultiScribe GS excels at it. An impressive array of options is available. With a click of the mouse, you can set a page size and choose to print normally or horizontally. You can skip over perforations or print continuously. The mouse can be used to set print quality, page numbering and paper feed options. If you are printing with an Imagewriter II, you can print in color.

The options mentioned and all others have preset defaults, so other choices presented often may be skipped. A special reduction option prints documents at 50 percent of normal size. Finally, printing with a Laserwriter presents additional options, including one that substitutes laser fonts for regular fonts and another that smooths graphics.

The one criticism I have involves a 40-page supplement to the manual. It provides information on numerous changes—virtually all product improvements—but there's no way to incorporate the addendum into the manual itself. The developers are to be commended for continuing to make changes and for keeping users informed about those changes, but other software developers have found effective ways of managing those updates, most often with loose-leaf manuals.

The Apple IIgs is an exciting computer. Fortunately, we are starting to see more programs that take advantage of its power. MultiScribe GS is such a program. It is easy to use, extremely powerful and fairly priced. And, like the machine it runs on, MultiScribe GS is fun to use.

Brian D. Monahan is associate vice president of Iona College in New Rochelle, N.Y., where he also teaches computer science courses. His CompuServe User ID number is 70007,3000.

Go Online for More Software Reviews

The following software reviews are available in *Online Today Daily Edition* by typing GO OLT-230 at any CompuServe Information Service prompt. Many daily-edition and some print-edition software reviews are supplemented with GIF graphics that may be viewed in or downloaded from Library 6 of the *Online Today* Readers' Forum (GO OLTFORUM).

Shakespeare Desktop Publisher
Manufacturer: *Infinity Software Inc.*
Computer: *Commodore Amiga.*

ProTERM 2.0 Communications
Manufacturer: *Checkmate Technology*
Computers: *Apple II family including IIgs.*

TopDraw Graphics and Font Library
Manufacturer: *Styleware Inc.*
Computer: *Apple IIgs.*

EasyCAD 2 Design and Drafting
Manufacturer: *Evolution Computing*
Computers: *IBM compatibles.*

Brooklyn Bridge 2.0 Computer Link
Manufacturer: *White Crane Systems*
Computers: *IBM compatibles and laptops.*

Fastwire II Computer Link
Manufacturer: *Rupp Brothers*
Computers: *IBM compatibles and laptops.*

Webster's New World Professional Spelling Checker
Manufacturer: *Simon and Schuster Software* **Computers:** *IBM compatibles.*

Font Effects Utility
Manufacturer: *SoftCraft Inc.*
Computer: *IBM compatibles.*

WYSIfonts Soft Font Installer
Manufacturer: *SoftCraft Inc.*
Computers: *IBM compatibles.*

WordPerfect Executive

Integrates Useful Business Tools

WordPerfect
288 West Center St.
Orem, UT 84057
801/227-5670 or 800/321-4566

Computers: Most IBM-compatible computers, including laptops.
Operating Systems: PC-DOS or MS-DOS version 2.0 or higher.
Media: Supplied on two 360K 5.25-inch diskettes and one 720K 3.5-inch diskette; requires at least two 360K drives or one 720K drive.
Copy Protection: None.
Required Peripherals: None.
Other Requirements: Minimum 512K RAM (640K RAM recommended).
Optional Items: Hard disk with 700K of free space; serial or parallel printer; color monitor and video adapter.
Systems Used for Test: (1) 640K Toshiba T1100 Plus with two 720K 3.5-inch disk drives, LCD display and Epson FX-85 printer; running Toshiba MS-DOS 2.11. (2) 1,024K Proteus 286GTX computer with two diskette drives, one 20MB hard disk, ATI VIP video adapter, NEC MultiSync monitor and Acer LP-75 laser printer; running IBM PC-DOS 3.10 at 12 MHz.
List Price: $249.

Reviewed by Ernest E. Mau

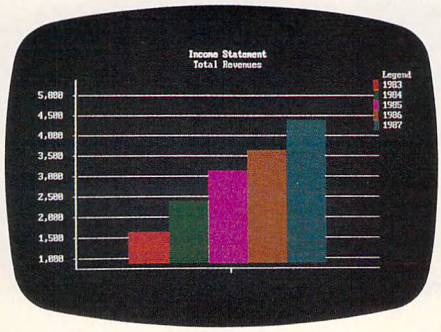
Among the needs of most business professionals are a word processor, a spreadsheet, an appointment calendar, a phone book, a calculator and a note-keeping system. Although many software packages combine at least some of those functions, few attain as workable and tightly integrated a product as WordPerfect Executive (version 1.0).

WordPerfect Executive offers all of these features, plus it provides bar-chart graphics, a spelling checker, keyboard macros, a clipboard and facilities for moving data or information from one module to another quickly and easily.

Although some facilities can be run on their own, the six primary modules normally are accessed through a menu-driven "shell," with user-specified modules loading automatically and remaining resident in memory until deliberately removed.

Suitable for desktop computers with hard disks, WordPerfect Executive has been structured with portable and laptop computers in mind too. Keeping the shell and working modules in memory eliminates reloading programs from disk each time they're needed. With slow diskette drives, waiting for repetitive program loading might otherwise make using the software a sluggish, tiresome chore. Furthermore, reducing disk accesses lessens the drain on laptop computer batteries, letting those computers run longer on a charge.

WordPerfect Executive provides two ways of exiting modules. Striking [ALT-SPACE] exits immediately but leaves the module and work resident in memory. The F7 function key removes the module from memory after letting the user save work to disk. If a module was the last one loaded, an F7 exit frees its memory, otherwise an F7 exit leaves the memory space allocated but empty until all later loaded modules also are released.



Professional tool: *WordPerfect*

The system also enables the user to jump from module to module without going through the main menu. Strike [ALT-W] and the system jumps to the word processor. Striking [ALT-S] jumps to the spreadsheet, [ALT-C] to the calculator, [ALT-N] to the notepad and so on. All parts of WordPerfect Executive are instantly accessible this way.

WordPerfect Executive also lets information pass between modules. While data may be copied manually to and from the clipboard, special macros are more convenient. Some key macros already are provided to move information into the word processor by extracting an appointment or week of appointments from the calendar, retrieving a calculator result, retrieving expense information from the spreadsheet, retrieving notecard entries or retrieving phone directory data.

Other macros load predesigned letter, itinerary, memo and travel report forms into the word processor. The user merely fills the blanks and adds text to produce documents. WordPerfect Executive's installation process has the user enter a name and title that are inserted automatically in a memo's "From" slot, a letter's signature line or a travel report's header. The letter macro even dates the letter and retrieves a recipient's name, title, address and salutation from the address book.

The user can prepare new macros to automate other tasks or meet special requirements.

Each module is quite usable. The word processor is a special version of WordPerfect and will appeal to anyone comfortable with WordPerfect. It has all the features expected of a good word processor, and it readily handles ASCII text importing and exporting. It even accepts, displays and prints bar charts created in the spreadsheet.

The spelling checker is fast and can check a word, page or entire document, but it passes too many varietal spellings, especially where a consonant may or may not be doubled when adding a suffix. It accepts "labeled" and "labelled," "leveling" and "levelling," "traveler" and "traveller" and similar forms without question, so it's not strict enough when style and consistency are important.

The spreadsheet handles 256 columns and 8,192 rows, has formatting controls, has an extensive set of functions and operators, and is capable of importing or exporting various file formats including Lotus 1-2-3 worksheets (except for some differences in formula functions). Although disappointingly limited to rudimentary bar charts, the graphing function is useful when data must be presented in visual form.

The phone directory, note cards, appointment calendar and calculator are versatile and functional. The calendar even handles scheduled appointments and ranked to-do lists. However, the phone directory cannot function as an auto-dialer, and WordPerfect Executive has no provisions for modem usage.

Given the willingness to accept meager graphing capabilities and a too-forgiving spelling checker, WordPerfect Executive is a dexterous tool. It won't replace powerful freestanding software in an office environment, but it should satisfy individuals who don't need or want dedicated and overly complex software.

Ernest E. Mau, a full-time free-lance writer and Online Today *reviews editor, is based in Aurora, Colo. He is the author of several books and nearly 300 articles on microcomputer products and applications.*

GEM Presentation Team

Gives High-Quality Presentations

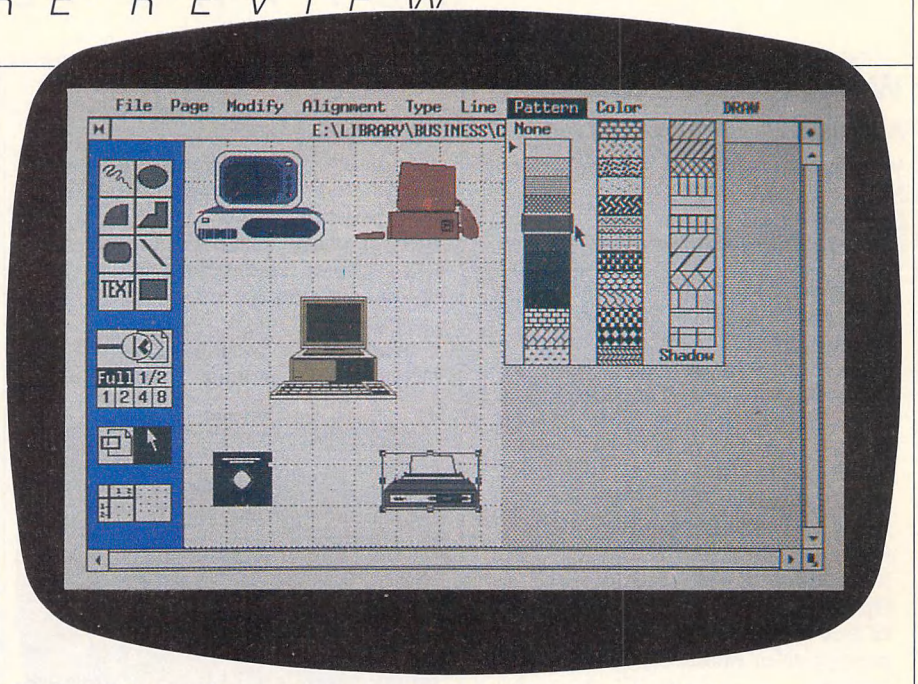
Digital Research
60 Garden Ct.
Box DRI
Monterey, CA 93942
408/649-3896 or 800/443-4200

Computers: IBM PC, PC-XT, PC-AT, 3270 PC and PS/2; AT&T 6300; 100 percent IBM PC compatibles.
Operating System: PC-DOS or MS-DOS version 2.0 or higher.
Media: Supplied on both 5.25-inch and 3.5-inch diskettes; requires two diskette drives or one diskette drive and a hard disk.
Copy Protection: None.
Required Peripherals: Monochrome or color graphics card (supports AT&T Monochrome Card, AT&T DEB Card, Hercules Graphics Card, IBM CGA in monochrome only, IBM EGA and 100 percent compatibles).
Other Requirements: Minimum 384K RAM.
Optional Items: Mouse, graphics tablet or any device supporting Microsoft's "mouse.com" driver; graphics printers; HPGL-compatible plotters.
System Used for Test: 640K Compaq Deskpro 286 with one 1.2MB diskette drive, one 360K diskette drive, one 40MB hard disk, Vega VGA video adapter, NEC MultiSync II monitor and Hewlett-Packard LaserJet Plus printer; running MS-DOS 3.3.
List Price: $495 (Includes GEM/3 Desktop).

Reviewed by Harry Green

GEM Presentation Team is a collection of four programs: GEM/3 Desktop, GEM Draw Plus, GEM Graph and GEM WordChart. Together, the programs prepare reports, graphics, and overhead and 35mm transparencies.

GEM/3 Desktop, an interface between the user and DOS, is the platform from which the other applications perform. Icons selected by mouse or keyboard represent four types of files: directories, executable programs, GEM applications, and textfiles and data files. With its icons and pull-down menus, GEM/3 Desktop is an effective working environment for users who prefer a graphics interface to DOS. Earlier versions of GEM Desktop have been reviewed in *Online Today*, and because this version operates much like previous ones, this review focuses on the other applications.



Platform for versatile presentation programs: *GEM Presentation Team*

With GEM Presentation Team, you can create virtually any kind of presentation, and material produced by one program can be used by another. For example, you can import images produced by GEM Draw Plus into graphs produced by GEM Graph or into charts produced by GEM WordChart. GEM/3 Desktop includes Bitstream Fontware in Dutch and Swiss typefaces and in sizes from six to 99 points, if your printer is capable of supporting them. Type styles are chosen from pull-down menus, and no additional commands are needed to display them on screen as they will appear in finished documents.

GEM Draw Plus enables you to create a drawing by selecting shapes from a menu that occupies the left fifth of the screen. Shapes can be stretched, compressed and otherwise manipulated to create virtually any kind of drawing. They can be stored in a library and imported into other drawings.

The package comes with an extensive library of ready-made images. You can choose from several views of computers, cameras, tools and other such objects. The GEM Draw Business Library, also included with the package, offers a variety of border styles, flow charts, control and electrical symbols, plus several styles of organization charts that can be filled with names and titles.

To create a drawing from library images, you can split the screen vertically, load one side with images, and move them to the working space on the other side. From pull-down menus, you can choose various patterns or type fonts to decorate the drawing.

GEM Draw Plus isn't intuitive to use, but after you get the hang of it, it is an effective program that creates professional-quality images with less effort than doing them by hand.

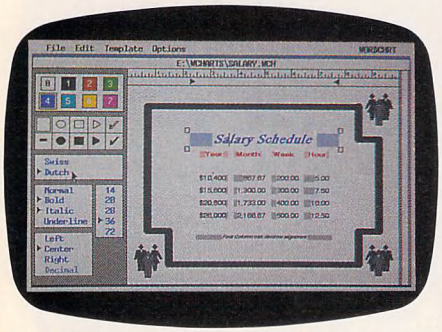
GEM Graph uses similar techniques to create impressive presentation-quality graphs. Of course, there are limited ways to present graphic information, such as lines, bars, smokestacks and pie charts, but GEM Graph produces them with outstanding style and ease. Line and bar charts are enclosed in a three-sided box that has a three-dimensional appearance. Downloadable type fonts and different patterns give flexibility in creating graphs in minutes that would take hours to duplicate by hand.

The basic data are entered in a table, either by hand or by importing from a spreadsheet. Labels and headings are typed in clearly identified spaces, after which you can choose the type style and font. You can easily change styles and see the results on the screen, although not necessarily in a single view. If the graph is too large, you can scroll vertically and horizontally with scroll bars.

The final program in this package, GEM WordChart, creates textual presentations. Its opening screen is a form with spaces for headings, subheads and itemized lists. These typically are used in slide or overhead presentations to remind the audience of a speaker's major talking points.

You can choose size and style of type fonts across a broad range. Major points can be highlighted with bullets, squares, check marks and other designators. You can further embellish word charts using a library of borders. This program also can make organization charts from empty boxes and connecting lines of charts in the library. You also can import images from GEM Draw Plus. If you use restraint in decorating a slide, the result has a professional appearance.

GEM/3 supports various output devices including dot-matrix and laser printers, plotters and photographic devices. Files can be sent to a service bureau to prepare 35mm slides for a price that probably will convince you that overheads produced on a copy machine are a bargain. However, the quality of full-color transparencies is essential to many applications, and the price is a fraction of what's charged by graphics firms.



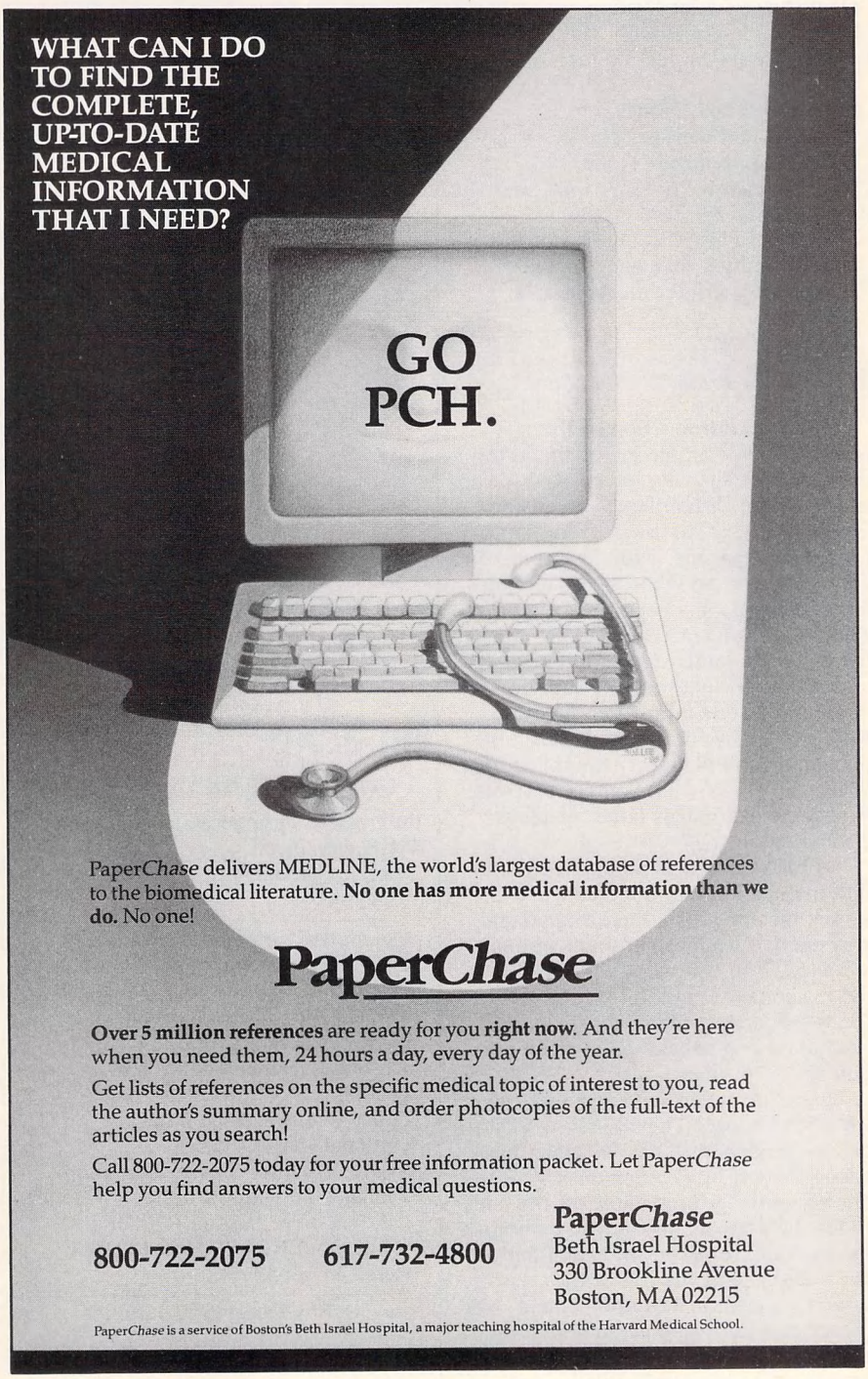
Text chart preparation: *GEM*

I tested the programs with a LaserJet Plus printer and achieved excellent results with only slight raggedness around diagonals and circles. Text printouts aren't as crisp as letters from cartridge fonts, but the range of sizes and styles more than compensates. The only drawback is slow speed; an average page takes three to five minutes to print, but GEM/3 Desktop includes a print spooler that lets you continue to work while printing.

In separate tests by *Online Today*'s reviews editor, GEM/3 Desktop version 3.0 would not install directly on software-controlled removable-media drives such as IOMEGA Bernoulli Boxes or Sysgen DuraPaks. GEM/3 Desktop doesn't recognize them as acceptable installation destinations. A preliminary version 3.1 was supposed to fix the problem, but didn't, so users of such drives must approach GEM/3 Desktop applications with caution. The programs can be run from diskettes, but doing so cripples much of their flexibility.

Aside from that, there's much to praise and little to criticize about GEM Presentation Team. I've made hundreds of slides with clip art, lettering machines and large fonts on the LaserJet and will continue to do so for minor presentations that aren't worth computer time. But for a full-scale presentation that appears professionally done, GEM Presentation Team is a collection of programs I highly recommend.

Harry Green is president of Pacific Netcom Inc., a Portland, Ore., firm that consults with businesses on using office automation and telecommunications to improve productivity.


WHAT CAN I DO TO FIND THE COMPLETE, UP-TO-DATE MEDICAL INFORMATION THAT I NEED?
GO PCH.
PaperChase delivers MEDLINE, the world's largest database of references to the biomedical literature. No one has more medical information than we do. No one!
PaperChase
Over 5 million references are ready for you right now. And they're here when you need them, 24 hours a day, every day of the year.
Get lists of references on the specific medical topic of interest to you, read the author's summary online, and order photocopies of the full-text of the articles as you search!
Call 800-722-2075 today for your free information packet. Let PaperChase help you find answers to your medical questions.
800-722-2075
617-732-4800
PaperChase
Beth Israel Hospital
330 Brookline Avenue
Boston, MA 02215
PaperChase is a service of Boston's Beth Israel Hospital, a major teaching hospital of the Harvard Medical School.

GO OLI for more information.

Stepping Out II:

A Macintosh Screen Extender

Berkeley Systems Design
1708 Shattuck Ave.
Berkeley, CA 94709
415/540-5536

Computers: Apple Macintosh Plus, Macintosh II or Macintosh SE.
Operating System: System 4.1 or higher; compatible with MultiFinder.
Media: Requires one 3.5-inch disk drive.
Copy Protection: None.
Required Peripherals: Mouse.
Other Requirements: None.
Optional Items: Printer.
System Used for Test: Apple Macintosh Plus with one 3.5-inch drive, one hard disk and Apple Imagewriter printer on Appletalk network.
List Price: $95.

Reviewed by Brian D. Monahan

Since the introduction of the Macintosh, users, feeling cramped by the nine-inch display, have asked for a larger screen. While large screens are available, users shy away from them for various reasons, with cost being the most common. So while the Macintosh's loyal following has been built on an easily used interface resembling a desk, the cry for a larger desk continues.

Recent advances in software demand more screen in which to work well, especially for graphics, desktop publishing and engineering applications. What-you-see-is-what-you-get software is great, but it makes larger displays critical.

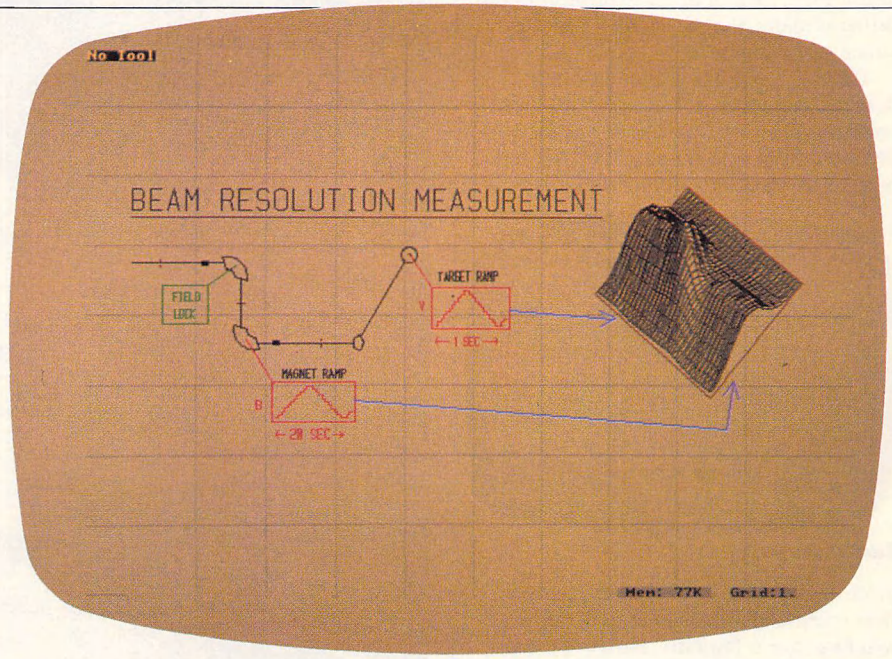
Stepping Out II is an application that installs itself into memory, reserves memory for a large screen and stays active while other applications are used. You can work with part of the big screen at normal size or with the whole screen reduced. For detail work, you can enlarge any screen portion up to 16 times.

There are seven screen sizes from which to choose. The 20-inch workstation is the default. Once a screen has been selected by clicking on it with the mouse, moving the pointer off the edge slides the view as fast as you can move the mouse. However, the menu bar stays in place at the top of the screen—a significant improvement over earlier program versions in which the menu was affected by screen size. New screen sizes also may be defined in pixels or inches.

Stepping Out II makes sense for many Macintosh applications. Users who regularly work with wide tables, large spreadsheets and full-page desktop publishing layouts no longer are limited to small viewing windows and slow scrolling.

Stepping Out II is compatible with software that works with big screens, and many popular programs are being upgraded to such compatibility. If you buy Stepping Out II to work with particular software, you might want to contact the publisher to see if that software is compatible with large screens.

Brian D. Monahan is associate vice president of Iona College in New Rochelle, N.Y. where he also teaches computer science courses. His CompuServe User ID number is 70007,3000.



Basic design for beginners: *IntroCAD*

IntroCAD:

A Good but Limited Starter Package

Progressive Peripherals & Software
464 Kalamath St.
Denver, CO 80204
303/825-4144

Computer: Commodore Amiga.
Operating System: AmigaDOS 1.2 and Intuition.
Media: Supplied on 3.5-inch disk.
Copy Protection: None.
Required Peripherals: Monitor; printer.
Other Requirements: None.
Optional Items: Plotter.
System Used for Test: Commodore Amiga 1000 with 1080 monitor, external disk drive, Epson RX-80FT+ printer and KickStart in ROM.
Retail Price: $79.95.

Reviewed by Cheryl Peterson

IntroCAD is a limited computer-aided design package for those who don't need all the bells and whistles of more expensive CAD packages. While offering most features needed by beginning or average CAD users, it doesn't get into layering and doesn't offer templates with tens of thousands of parts.

A freehand mode lets the program function much like a bit-mapped drawing package, but it doesn't offer facilities such as filling figures with color or patterns. Instead, it defines created images as objects that later can be manipulated independently. An IntroCAD object can be as simple as a line or as complex as a polygon.

IntroCAD has commands for drawing figures such as lines, boxes, circles, arcs and polygons on the screen. Once created, items can be grouped for easy reference. While it may take a half-dozen polygons to draw a complex figure, you can link the whole into a group and move it as one piece. There is no hierarchical grouping, however. If you combine two groups, they become one big group rather than two linked smaller groups. If you unlink them, they fall into individual components,

not subgroups. Items cannot be members of more than one group, either, but this isn't a serious limitation for the less-advanced users this program is designed to satisfy.

IntroCAD includes a "clone" feature that can duplicate an existing figure without redrawing the whole thing. Cloning can be used with individual figures or with groups. With a separate set of commands, "parts" can be saved to disk as files and then placed into current work using the mouse. These related commands make it easy to handle repetitious work.

Rulers and grids help draw figures with exact measurements and straight lines. A "snap to" command comes in two versions. The first, called "naive," snaps all edges to the nearest grid lines. A more exacting method places points on the different sides of the figure, and you point and click on the area to snap.

The zoom mode manipulates fine details. If you print your drawing in this mode, the resolution is the maximum the printer or plotter can provide. While printing with my Epson RX-80FT+ is slow, the results are worth the wait, and the time is about the same as with other drawing packages.

Text can be entered into a drawing in various sizes, so labeling items is easy and an original text size can be altered using an edit-menu command. However, changing text size in midstream does not change text already placed in the drawing, and there is no way to make text transparent.

There are fine-tuned controls (using the Arrow keys) if an artist needs to manipulate exacting details. The program operates in interlace mode, so there is the usual "squiggle" when not using any special products designed to control interlace "flicker." That is tolerable for most users, though.

I'm amazed at the number of printer and plotter drivers provided. While IntroCAD doesn't have one for my DEC LN-03 printer, it has most other popular printers. The drivers are in hierarchical menus founded on the supposed user-base of each, making common ones easy to find but putting less-common ones deeper in the file structure.

IntroCAD is easy to use, with no complicated commands to learn, and almost everything about it is intuitive. You need never take your hand off the mouse except to type file names, so the entire program could be run without resorting to keyboard input, which is refreshing after using all the keyboard "shortcuts" associated with some other drawing packages. Because of IntroCAD's simple nature, keyboard commands would not add anything to this program.

IntroCAD is ideal for someone who doesn't need a fancy $300 CAD package to do circuit board layout or architectural design. Instead it is an inexpensive, functional product that many beginning CAD users will find quite adequate.

Cheryl Peterson, a free-lance writer from Miami Beach, writes reviews for several computer magazines. Her CompuServe User ID number is 72366.2645.

If you are not a Mac Forum member... your November *Online Today* will be several pages shy.

Sorry. The special, all-new Macintosh insert in the November issue of *Online Today* will only appear in issues sent to the 50,000 most active members of the Macintosh Forums.

Feeling left out?

That's easily remedied. Participate in a Macintosh Forum... get an insert! If you're not already an active member, type GO MAUG and join a forum.

Now that you're "in"...

Your November issue will include features on CompuServe Navigator, desktop publishing and Apple vendors. Consult with Mac experts online. Make MacFun. And more.

SAME DAY SHIPPING!
SAVE MONEY.
GET QUALITY.
Diskettes
$1.19 ea. 3.5"
$.29 ea. 5.25"
100% Certified above American National Standards Institute (ANSI) spec's for quality and value.
Price includes Sleeves, Labels & WP Tabs.
Money Back Guarantee.
3.5" DS 135 TPI
$1.19 ea Qty 100
1.29 ea Qty 10
Labels included
5.25" DS DD Soft Sectored
$.29 ea Qty 100 Paper Sleeves
.33 ea Qty 100 Tyvek Sleeves
All include labels & WP tabs
Prices subject to change
Free Delivery for $100+ orders.
$3.50 Others. MC, V or MO Accepted. Ohio residents add 5.5% sales tax.
See us on The Electronic Mall™–GO DM
Order via Direct Micro BBS
614-771-8773
1-800-288-2887
8 AM-10 PM Mon-Fri EST
10 AM-6 PM Sat EST
Direct
M·I·C·R·O
1776 Dividend Drive
Columbus, OH 43228-9967
1-614-771-8771
FAX 1-614-771-8772

GO OLI for more information.

Online Book Reviews

Following are summaries of book reviews available for reading this month in *Online Today Daily Edition*. To read the complete reviews, type GO OLT-240 at any CompuServe Information Service prompt.

***Online Reference and Information Retrieval,* Second Edition**

By Roger C. Palmer
Libraries Unlimited, 1987
189 pages, $25 (softcover)

This step-by-step guide to the world of electronic database searching is written for the professional librarian, but it also will prove useful for the serious business researcher. Reviewer Cathryn Conroy says it teaches by example, offering specific instructions and search tips for several databases. *GO 5700*

Hard Disk Management in the PC & MS DOS Environment

By Thomas Sheldon
McGraw-Hill, 1987
238 pages, $24.95 (softcover)

Written for all hard-disk users, novice and experienced, this book provides an introduction to the operating system and advanced discussions of special-interest topics. Reviewer James Moran says the author's writing style and explanations are easy to understand. *GO 5710*

Computer Lib/Dream Machines

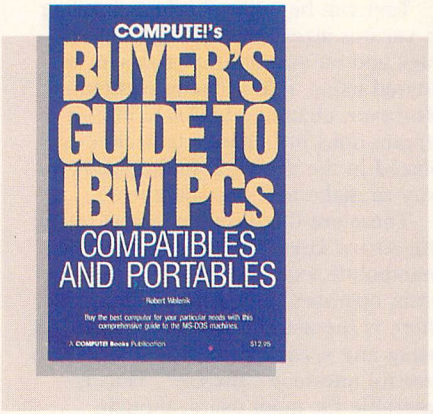
By Ted Nelson
Tempus Books, 1987
336 pages, $18.95 (softcover)

This update of two 1974 computer books remains, in many ways, a part of the 1970s. Saying it has a "hypertext" quality (lots of blurbs and boxed text), reviewer Richard Danca recommends the book for browsing and learning bits of computer trivia. *GO 5730*

Design for Desktop Publishing: A Guide to Layout and Typography on the Personal Computer

By John Miles
Chronicle Books, 1987
112 pages, $14.95 (softcover)

Although reviewer Christine Graves is disappointed by the sometimes confusing organization and layout of the book, she says the information contained in it is useful and in many cases unique. She recommends it as a worthwhile book for beginning desktop publishers. *GO 5740*


COMPUTE!'s
BUYER'S GUIDE TO IBM PCs
COMPATIBLES AND PORTABLES
Robert Wolenik
Buy the best computer for your particular needs with this comprehensive guide to the MS-DOS machines.
A COMPUTE! Books Publication
$12.95

COMPUTE!'s Buyer's Guide to IBM PCs: Compatibles and Portables

By Robert Wolenick
COMPUTE! Books, 1987
266 pages, $12.95 (softcover)

This book is designed to sort out the confusion faced by most buyers of IBM PC-compatible computers. Reviewer Paul Gilster says this directory of more than 100 computers is useful, although it is destined to become outdated quickly. *GO 5720*

Looking for a Book Reviewed in *Online Today*?

For publishing information on the books reviewed in *Online Today Daily Edition,* type GO OLT-240 at any CompuServe Information Service prompt and read this month's reviews from the main menu. Then select Option 6, "Publishers' Addresses," for information to order the books reviewed.

ONLINE TODAY

Ad Council

WHEN THERE WILL BE NO LONELINESS, NO DESTITUTION, NO SICKNESS, NO WAR, ONLY THEN WILL THERE BE NO NEED FOR THE AMERICAN RED CROSS.

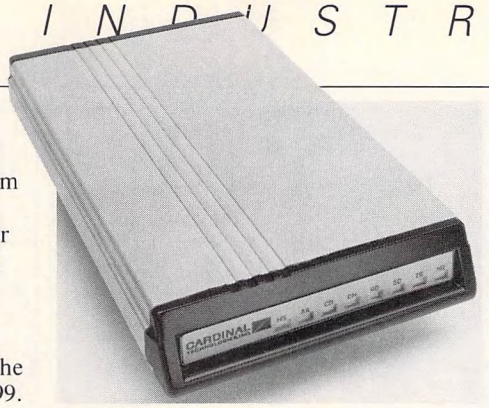
Contact your local chapter.

American Red Cross

Desktop Modem

Cardinal Technologies has introduced a 2400-baud, stand-alone modem featuring digital signal processing.

The MB2400EX produces low error rates at 2400 baud and maintains that performance over phone line interference that can force many 2400-baud modems to slow down to 1200 baud. The modem is fully compatible with the Hayes AT command set and costs $299. It has a 25-pin RS-232 port and two switched phone jacks, one for an external line and the other for voice, allowing communications without changing lines.



For information, contact Cardinal Technologies Inc., 1827 Freedom Rd., Lancaster, PA 17601; 717/293-3000.

9600-Baud Modem

The MultiModem V32 from Multi-Tech Systems, a 9600-baud modem, costs $1,495.

Features include dial-up asynchronous, full-duplex operation over public-switched telephone networks for either domestic or international data communications. The modem is also compatible with all appropriate communications standards at lower speeds.

For information, contact MultiTech Systems Inc., 82 Second Ave. S.E., New Brighton, MN 55112; 800/328-9717 or 612/631-3550.

Modems for IBM PS/2

Multi-Tech Systems has introduced two modems for the IBM PS/2 Micro Channel computers. The MultiModem-224PS is an internal board modem providing 2400, 1200 and 300 baud. The retail price is $499. The MultiModem-224ES, also an internal modem, adds error detection and retransmission along with data compression using MNP Class 5 protocol. The retail price is $549. Both modems install in IBM Models 50, 60 and 80 PS/2 computers.

For information, contact Multi-Tech Systems Inc., 82 Second Ave. S.E., New Brighton, MN 55112; 800/328-9717 or 612/631-3550.

Automatic Line Switching

Extel has introduced an automatic line switch that allows fax and modem-based terminals to share a single standard phone line.

Called Line One, the product allows users to send and receive fax and data communications from a modem-based personal computer or terminal without the need for a second line. It can distinguish an incoming call from a fax unit and a computer modem, and route the calls automatically with no operator involvement. The retail price is $295.

For information, contact Extel Corp., 4065 Commercial Ave., Northbrook, IL 60062; 312/291-2500.

HyperACCESS Software for Modemless IBM Communications

Hilgraeve has announced that its HyperACCESS communications software for the IBM PC, PS/2 and compatible computers now provides specific support for modemless Integrated Services Digital Network data communications through AT&T ISDN Desksets 7505, 7506 and 7507.

HyperACCESS can pass data through ISDN's 16,000 baud D-channel at speeds up to 50,000 baud. When installing the software, the user selects the AT&T ISDN Deskset from a list of supported devices, which includes more than 40 modem models. It configures itself and the deskset automatically. The retail price is $149.

For information, contact Hilgraeve Inc., P.O. Box 941, Monroe, MI 48161; 800/826-2760.

MacBLAST Software for Fast, Error-Free Communications

Communications Research Group has introduced MacBLAST communications software for the Macintosh Plus, SE and II computers.

MacBLAST is the first software product to feature fast, error-free asynchronous data transfer between the Macintosh and other major computers' operating systems, including IBM mainframes, DEC VAXs and PDPs. The retail price is $195.

For information, contact Communications Research Group, 5615 Corporate Blvd., Baton Rouge, LA 70808; 504/923-0888.

Go Online for More Product Announcements

The following new product announcements are available this month in *Online Today Daily Edition* by typing GO OLT-250 at any CompuServe Information Service prompt.

RJ Quick Jack, *multi-jack adapter, Leviton Manufacturing Co.*

AcroSpin (version 1.1), *dynamic 3-D wire frame display software for the IBM PC and compatibles, Acrobits.*

Co-Clock, *speeds up the math co-processor on an IBM PC-AT by up to 50 percent, Symbiotic Technologies.*

PC-KEY-DRAW (version 3.5), *shareware graphics program for the IBM PC family of computers that now feature a HyperDraw, Oedware.*

The Brooklyn Bridge (version 2.0), *high-powered file manager, White Crane Systems Inc.*

The Coordinator, *workgroup software for the IBM PC-XT, PC-AT and compatible computers, Action Technologies*

 # Cruncher, *all-in-one spreadsheet, graphics and database management program, Simon and Schuster Software.*

MACPASTE, *reads, edits, saves and prints ReadMac picture files on the IBM PC, PC-SIG Inc.*

Stock Expert, *program that evaluates companies for investing, Knowledge Garden Inc.*

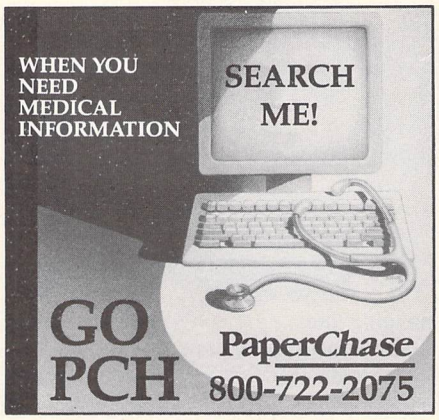
RightWriter, *grammar and style checker, RightSoft Inc.*

Make Money With Your PC

A Revolutionary Software System, designed for maximum profits with minimum setup, now transforms any IBM PC/XT/AT or compatible computer into a secure, reliable Bulletin Board and Information Host System.

Subscription Systems throughout the free world are presently being used in dial-a-date and matchmaking applications, for multi-user databases and multiple listing endeavors, on-line order taking, along with scores of other lucrative telecommunications tasks.

To learn more about this unique, self-perpetuating opportunity that can adapt to both voice and data environments, contact: PC/WORKS at (805) 654-0724 or FAX (805) 650-0195.



INFO-MAT
A FREE WEEKLY ON-LINE MAGAZINE
On 180 BBSes nationwide
Computer, Software, Telecom news & more
Always at your fingertips

SYSOPS
to carry INFO-MAT on your BBS, call
modem: 913-478-9239
voice: 913-478-3157
ad sales: 312-251-2541
50 + pages of news, columns, features, etc., Each Week!

INFO-MAT affiliate BBS list: Go Access (file FREEMGZ)

Turn Your PC/XT/AT Into Multi-User, On-Line System

INFOHOST®
Multi-user On-line System Software
(Reviewed by PC Week on 5/19/87)
You can now place a database of goods and services on-line using your own PC, so your customers can dial in over phone lines to access information, leave messages, and make purchases via modem. InfoHost, which can support as many as eight simultaneous modem interfaces, features a customizable relational database that can be adapted to the needs of your business.
A-Comm Electronics, Inc.
377 Route 17 South, Hasbrouck Hts., NJ 07604
201/288-7885; TLX: 4948376
Call Our Demo System
201/288-7792
(With Modem Settings 8/1/N)

Be A Lotto Millionaire!
NEW! Lotto Picker™ Plus v2.0 stores winning Lotto & Pick 3/4 numbers & uses probability analysis in order to select what might be your million $$ ticket. Guaranteed to work for all lotteries worldwide. Not copy-protected. For IBM, 64k Apple II, & C64/128 **$34.95** (+4.55 sh). 3.5" add $10. **GE RIDGE**, 170 B'dway, #201OL, NYC 10038. **Orders 1-800-634-5463 ext. 293.** Info 718-317-1961.

Direct From Our Roaster To You
C•O•F•F•E•E EMPORIUM
Purveyors of Gourmet Coffees & Teas
GO COF
- We offer the World's Rarest Coffee—Jamaican Blue Mountain
- Orders shipped within 48 hours

1500 US & OVERSEAS JOBS!
We are online every Thursday, Friday, Saturday & Monday from 9 am to 9 pm (Eastern). See 1500 US & overseas jobs. Voice: 602 841 2134. Modem: 602 973 2002. 8 databits, 1 stopbit, no parity, 300 or 1200 baud. Use user #: 192 and password: USOVER to sample system.
CAREER LINK ONLINE

Guidelines to Requesting Information Through OLI

Online Inquiry

Online Inquiry is *Online Today*'s electronic version of the traditional reader inquiry card. To request additional information about products or services described in *Online Today*, simply access CompuServe and type GO OLI at any prompt.

CompuServe Page OLI-1
ONLINE TODAY ADVERTISERS
ONLINE INQUIRY (OLI)
1. OLI Instructions
2. Online Today Display Ads
3. Print Edition Reviews
4. Shopper's Guide Mini-Ads

Display Ads

GO OLI-160. Inquiries to this section will be followed by a brief description of the *Online Today* ad. To request additional printed information, simply enter your name and address at the prompts. OLI will add your User ID number and electronically forward your request to the appropriate advertiser(s). The names, addresses and User ID numbers will also be forwarded via US Mail at the end of each month.

CompuServe Page OLI-160
ONLINE TODAY ADVERTISERS/OLI
1. Oct. 1988 Advertisers
2. Sept. 1988 Advertisers
3. Aug. 1988 Advertisers

Editorial Articles/Reviews

At the end of each electronic version product review, you'll be asked if you wish to request further information through the Online Inquiry system. A "yes" response will let the system prompt you for your name, address and other information so that your request can be forwarded to the appropriate company. If you respond "no," the system will return you to the previous menu.

To request information about products reviewed in the print edition, GO OLI-280 and select the appropriate listing, such as October Hardware Reviews. At the next menu, select the product you're interested in. If you answer "yes" at the question prompt, the OLI system will prompt you for the necessary information.

Requests to these sections will be stored and forwarded by traditional mail once each month.

CompuServe Page OLI-280
REVIEW LISTINGS/PRINT EDITION
1. Oct. Hardware Listings
2. Oct. Software Listings
3. Oct. New Product Listings

Shopper's Guide

GO OLI-70 to get information about *Online Today*'s mini-ad program.

To request information from Shopper's Guide advertisers, follow the instructions outlined in each ad.

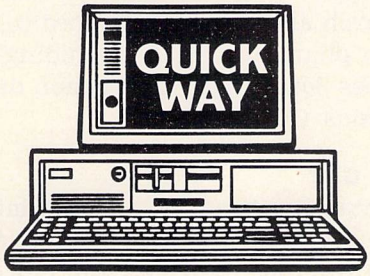
CompuServe Page OLI-70
SHOPPER'S GUIDE
1. About Shopper's Guide
2. Rates and Information

***Note:** Additional requests during the same session will not require you to re-enter your name and address.

QUICK WAY—24 HOURS A DAY

NOW...ON-LINE TRADING THROUGH QUICK & REILLY

Speed and convenience, plus huge commission savings:



USE ANY PC, ANY MODEM.

Now, with Quick & Reilly's *easy-to-use* QUICK WAY service, you can get quotes, place buy/sell orders, check your whole portfolio, review the latest research—*day or night*—on your own personal computer. And you get the same huge savings as non-computer clients (see table below).

Serve—the largest computer information network—which allows you instant access to Standard & Poor's Reports, Value Line Data Base II, over 10 years of market data on some 50,000 stocks, bonds, options, mutual funds, governments. And much more.

Here are some of the benefits of trading on-line with us:

- The QUICK WAY system is easy to learn and use. You can do it in minutes.
- QUICK WAY is universally compatible with *any* PC and *any* modem.
- You can get quotes on any stock, option or market index listed in the Wall Street Journal.
- You can place orders in minutes, day or night. Reports are sent back on-line, followed by written confirmations.
- You can monitor,on a single screen, the prices of up to 18 stocks. (You can similarly monitor options.)
- You can have from one to 75 trading accounts with no start-up or monthly subscription charges.
- A double-password system guarantees the privacy of your account(s).
- QUICK WAY is available through *Compu-*
- Quick & Reilly on-line brokerage services are also available on *Quantum Link, Dialog* and Pronto's *Investment Edge.*

Computer traders, of course, also get all the regular customer benefits which have made Quick & Reilly one of the nation's largest and most successful discount brokers. We serve over 375,000 investors coast to coast and do more than $3 billion a year in transactions.

Importantly, when you come to Quick & Reilly you come to great financial strength. Our aggregate capital is nearly SEVEN TIMES the amount required of us by NYSE and SEC capital rules. We're here to stay. Securities held in your account are protected up to $2,500,000.

For complete information plus an on-line demonstration and application for QUICK WAY, type GO QWK. Or call us toll free.

800-221-5220

IN NEW YORK:
800-522-8712 **212-943-8686**

COMPARE

	100 sh @ 40	300 sh @ 30	1000 sh @ 20
QUICK & REILLY	$41	$ 75	$ 98
*Charles Schwab	49	96	129
Merrill Lynch	97	194	356
Prudential Bache	90	196	400
Shearson Leh. Hutton	89	190	415
Paine Webber	91	190	397
Dean Witter Reynolds	93	186	404

*Includes Schwab's 1988 rate increases. (Telephone Survey 3/88)

Quick & Reilly, Inc. 152
MEMBER NYSE • SIPC
120 Wall Street, New York, N.Y. 10005
Please send me your free brochure on QUICK WAY computer trading.

NAME _____

ADDRESS _____

CITY _____ STATE _____ ZIP _____

UPDATE

IBM and Mac File Finders Online

IBM and Mac File Finder keyword-searchable databases provide quick reference to files in related forum libraries. Mac File Finder (GO MACFF) is a database of files from Macintosh-related forums, including MAUG, Aldus, Adobe, Microsoft and others. IBM File Finder (GO IBMFF) offers file information from IBMNET, Microsoft, Borland, Ashton-Tate and others.

IQuest Improves Medical Scans

IQuest has added the Consumer Health Scan and has improved the Medical Research Scan, the Pharmacology Scan and the Nursing and Allied Services Scan.

These Scans (SCAN MEDICINE) help members find health sciences information on IQuest. Use the Consumer Health Scan to locate current health information from sources written for the public. The Medical Research Scan locates research articles on most medical topics. The Pharmacology Scan provides comprehensive information on pharmaceuticals, including prescriptions, dosages, side-effects and more. The Nursing and Allied Services Scan finds information on occupational safety, health administration, nursing and other health fields. GO IQUEST

Catch the '10 Most Wanted' with GIF

Pictures of the FBI's 10 Most Wanted Fugitives are now available in Graphics Interchange Format. Your terminal must support GIF to view the fugitives' pictures. Access the Picture Support Forum (GO PICS) to download the GIF program file, SHWGIF, from Library 1. GO FBI

EMI Improves Flight Plans

EMI Aerocorp's flight planning programs accurately predict enroute times and fuel consumption with consideration of meteorological factors, which is significant in low-altitude flights and areas of rapidly changing weather systems. GO EMI

Order Users Guides Online

The new Financial Services Users Guide enables CompuServe members who access current and historical quotes to learn more about product capabilities and features, hidden options, switches for downloading and more. In addition, summary overviews and sample reports are provided for S&P Online, Disclosure II, Value Line and I/B/E/S.

The updated CompuServe Users Guide includes complete EasyPlex and forum guides, command summary cards for popular services, and detailed information on uploading, downloading and the Executive Option. GO ORDER

Prime/Daytime Hours Extended

Effective Sunday, Oct. 2, CompuServe's prime/daytime will be defined as 8 a.m. to 7 p.m. CompuServe's basic connect-time rates, which are the same as prime/standard and standard/evening rates, are unchanged. The one-hour lengthening of prime/daytime to 7 p.m. is to allow CompuServe's definition of daytime access to be consistent with that of its supplemental communications networks. The CompuServe network surcharge will continue as one rate for all time periods. GO RATES

Grand Openings in The Electronic Mall®

Fort Worth Computers (GO FWC), a Tandy/Radio Shack authorized sales center, offers computers, monitors, printers and Tandy cellular phones online. LifeSpan (GO LS) features health services, including EMERGIcard, a credit card-size microfilm of personal medical information; LifeLine, an emergency response system linked to 24-hour emergency assistance; a senior citizen counseling service; and innovative products in its General Store. GO MALL

Network Surcharge Announcement

Due to increased network costs, CompuServe network surcharges have changed from 25 cents per hour to 30 cents per hour. CompuServe basic connect-time rates remain the same. Members accessing CompuServe from overseas through Computer Sciences Corp. Infonet incur a $50 per hour surcharge at all times. The TYMNET and Telenet prime/daytime surcharges have increased from $10 per hour to $12 per hour. GO RATES

Shop On-line

and turn over a new leaf!

SPECIAL INTRODUCTORY OFFER FOR COMPUSERVE SUBSCRIBERS!

3 MONTHS FOR $1

With the change in seasons, why not change the way you shop? Turn to a more convenient alternative and use Shoppers Advantage. You'll pay the lowest prices on the products you order, while shopping from the comfort of your home. Shop when it's convenient for you, and save up to 50% off the manufacturers' suggested list prices on over 250,000 name-brand products.

- **User-friendly convenience.** We're open 24 hours a day, 7 days a week. Browse on-line, order on-line, and have your purchases delivered to your door. Simple menus and step-by-step instructions make it easy.
- **Tremendous selection.** Without leaving the comfort of your home or office, compare makes and models, compare name-brands—best of all, compare prices!
- **Lowest-price guarantee.** If you can find a lower price on an item you buy from us, we'll refund the difference.*
- **Double warranties.** You can double the manufacturers' warranty up to one year at no additional cost.*
- **Free catalogs.** We'll keep you informed about our latest "Best Buys" and exciting additions to our database of fine products!
- **Enroll today.** Sign on to CompuServe and enter **GO SAC** to have full membership privileges for 3 months for just $1. Then, unless you notify us, we will continue your membership and bill you for the low annual fee of $30. And, of course, you can cancel and receive a full refund at any time during the first year.

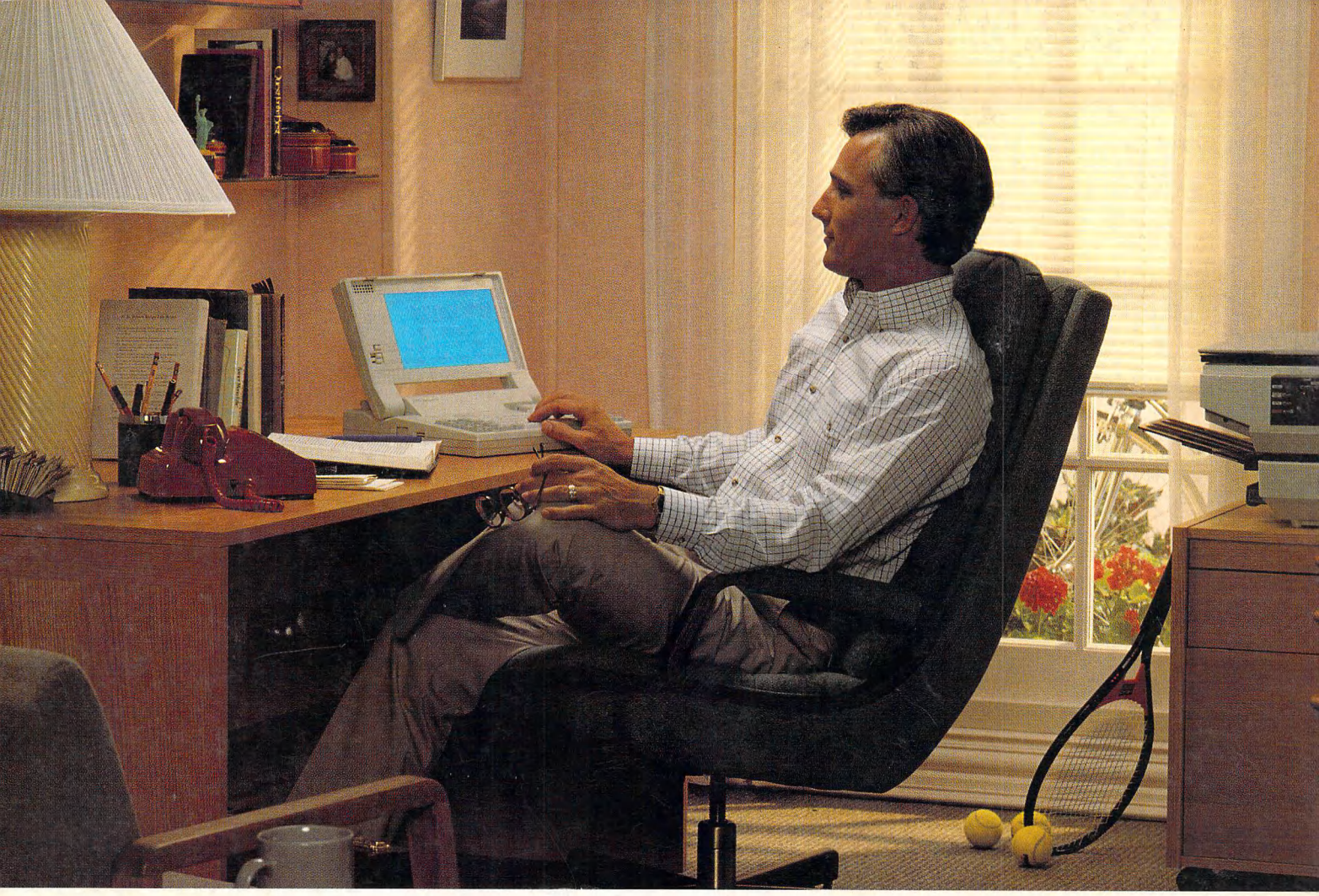
Enter GO SAC or
Call 1-800-843-7777

Shoppers Advantage℠
ON THE ELECTRONIC MALL®

© 1988, CUC International Inc.
Shoppers Advantage is a service of CUC International Inc.
The Electronic Mall is a service of CompuServe.
*Conditions of our Lowest-Price-Guarantee and Double Warranty Policy can be read on-line. C980T

Sample the world's premier, and most complete on-line shopping service!

GO OLI for more information.



EAASY SABRE puts travel technology in its proper place. Your place.

Technology has revolutionized the way people travel. And now, the revolution is coming to your place.

Say hello to EAASY SABRE — your personal link to the American Airlines SABRE reservation system. For years, the travel industry has relied on SABRE to make transactions easier. Now you can have that power, too.

EAASY SABRE is the most convenient way to book and confirm your reservations. Only EAASY SABRE gives you access to more than 630 airlines, 16,000 hotels, 36 car rental companies and more. And, with EAASY SABRE's prereserved seats, hotel and car confirmations, and profiles for storing your personal preferences, making reservations is easier than ever.

The Bargain Finder℠ feature sorts through over 35 million fares to find the lowest possible one for you. You can make your reservations on-line and then pick up your tickets at any travel agency, American Airlines City Ticket Office or airport ticket counter. You can even get them through the mail.

EAASY SABRE automatically sends your frequent traveler information to the airlines, hotels and car rental companies, so all your accounts are updated for you. You can also use EAASY SABRE to check your current AAdvantage® mileage balance anytime you like.

EAASY SABRE lets you do all these things from any PC that has a modem that connects to an ordinary telephone line. A communicating terminal will also do fine. The only other thing you need is a subscription to one of the major data networks.

So start making travel plans your way. At your convenience, 24 hours a day. Let EAASY SABRE put travel technology in its proper place. Your place. To begin, GO SABRE.

EAASY SABRE℠

The power to move people.™

AmericanAirlines

GO OLI for more information.

EAASY SABRE is a product of the SABRE Travel Information Network℠. AAdvantage® is a registered service mark of American Airlines, Inc.